NPT/CONF.2015/10

2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Distr.: General
12 March 2015
English
Original: French

New York, 27 April-22 May 2015

Report submitted by France under actions 5, 20 and 21 of the Final Document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

1. As indicated in the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the Governments of the five nuclear-weapon States parties to the Treaty seek to implement action 5 in order to further enhance transparency and increase mutual confidence and to prepare national reports on action 5 and their other commitments, as presented in 2014 to the Preparatory Committee for the 2015 Review Conference of the Parties within a common framework, in accordance with actions 20 and 21. Action 21 states that as a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security. The standard reporting form used in France's national reports includes categories, each relating to a different topic, under which relevant information is reported; the categories cover the three pillars of the Treaty: disarmament, non-proliferation and the peaceful uses of nuclear energy. France encourages all States parties to submit similar reports, in keeping with action 20.

Section I
National disarmament measures

2. France is fully committed to disarmament in accordance with the objectives of the Treaty. Its approach is comprehensive, progressive and practical:

(a) Comprehensive and progressive, because the goal of nuclear disarmament cannot be considered separately from collective security. Nuclear disarmament is possible only if the strategic context is taken into account and should be viewed as part of a gradual process that will guarantee all parties undiminished security and prevent a new arms race.

(b) Practical, because action is what matters. In that regard, France has taken very significant unilateral measures and made ambitious proposals for the determined pursuit of nuclear disarmament at the international level.

15-03646 (E) 300315 070415

Please recycle

I. National security policies, and nuclear-weapons doctrine and related activities

3. The French doctrine is presented publicly on a regular basis. Its basic tenets may be found, specifically, in the French President's public speeches, the most recent of which was delivered in Istres, France, on 19 February 2015, and the white papers on defence and national security, the latest of which was made public in 2013. These communications reaffirm the validity and principles of nuclear deterrence as understood by France, and help build confidence. Regular public statements such as these are necessary, even when there are no new developments. The reiteration of these principles is valuable, as it affords predictability and therefore improves stability.

4. In general, the role of nuclear weapons in France's doctrine of defence and national security is strictly limited to the defence of its vital interests, in extreme circumstances of self-defence.

5. In the light of the aforementioned latest white paper and the recent statement by the President of France, the fundamental principles of French nuclear deterrence are:

(a) **Political control of nuclear weapons**. France emphasizes the political conception of the use of nuclear weapons, for which the President of the Republic has the ultimate responsibility. Their control is therefore strictly political.

(b) **Nuclear weapons: designed to deter, not to be used**. In the French doctrine of deterrence, nuclear weapons are not battlefield weapons but a means of deterring a potential adversary from attacking vital national interests. For deterrence to work, the circumstances under which nuclear weapons would be used are not, nor should they be, precisely defined, so as not to enable the potential aggressor to calculate the risk inherent in such an attack.

(c) **Nuclear deterrence is strictly defensive**. France does not threaten any State, and its deterrence is not targeted. That was made clear in 1997 and has been reiterated since on many occasions. Potential adversaries must however be aware that the purpose of nuclear deterrence is to protect the country's vital interests against any State-led aggression, whatever its origin or its form.

(d) **Used only in extreme circumstances of self-defence**. French nuclear deterrence is governed by a threshold approach, regardless of the nature of the threat. Conversely, other doctrines advocate policies that depend on the nature of the threat — policies that seem reassuring for those who are concerned about the potential use of nuclear weapons. However, a deterrence threshold approach does not give nuclear weapons a greater role, provided the threshold is high. Such is clearly the case in French doctrine, whereby nuclear weapons may only conceivably be used in extreme circumstances of self-defence, a right enshrined in Article 51 of the Charter of the United Nations.

(e) **Application of the principle of strict sufficiency**. France adjusts the level and characteristics of its arsenal to the strategic context, at the minimum level needed to ensure its security. The threshold of sufficiency is determined by a national analysis of the strategic context.

(f) **Security assurances**. In his speech on 19 February 2015, the President of the Republic reaffirmed the security assurances given by France to all the non-nuclear-weapon States parties to the Treaty that comply with their international non-proliferation obligations. These security assurances are derived from:

(i) The French doctrine of deterrence, inasmuch as it unambiguously and consistently sets out the strictly defensive role of deterrence. Hence, the French doctrine is in itself a security assurance for non-nuclear-weapon States.

(ii) The statement made on 6 April 1995, whereby France reaffirmed, to all non-nuclear-weapon States parties to the Treaty, the security assurances it had given in 1982. The Security Council took note of it in its resolution 984 (1995). France considers that commitment legally binding, as reiterated by the President of the Republic in his statement on 19 February 2015. It therefore considers itself fully bound by the commitment and means to apply it in good faith.

(iii) The signing of the protocols to the treaties establishing nuclear-weapon-free zones, which cover more than one hundred States.

6. These commitments do not affect the right to self-defence as enshrined in Article 51 of the Charter of the United Nations.

II. Nuclear weapons, arms control (including nuclear disarmament) and verification

7. Disarmament is of the utmost importance to France, as demonstrated by its actions and tangible achievements, which have required investment of considerable financial and human resources.

A. Status and reduction of arsenals and nuclear forces

1. Reducing the size of French deterrent forces

8. In keeping with the principle of strict sufficiency, France's arsenal is maintained at the lowest possible level in the light of the strategic context and the foreseeable development of the threat. French nuclear forces are currently divided into seaborne and airborne components:

(a) Seaborne component: four nuclear-powered ballistic missile submarines based at Île Longue and equipped with M51 intercontinental ballistic missiles providing continuous seaborne deterrence.

(b) Airborne component: airborne support is provided by the air force on French soil or from the aircraft carrier *Charles de Gaulle*, using Mirage 2000N and Rafale aircraft carrying improved medium-range air-to-surface missiles.

9. As stated by the President of the Republic on 19 February 2015, France has fewer than 300 nuclear warheads. It has no undeployed weapons. All of its weapons are deployed and operational.

10. That figure reflects a very significant decrease in the size of French forces, as a result of changes in the strategic context. France has cut its arsenal in half in the past decade.

11. France acquired three nuclear components during the Cold War. Since then, in view of the changing strategic context, France has reduced its nuclear arsenal as follows:

(a) **A one-third reduction in the seaborne component**: The number of nuclear-powered ballistic missile submarine in the seaborne component was cut from six to four. France has begun dismantling its M4 nuclear-powered ballistic missile submarines. The submarine *Le Redoutable* has been open to the public at the Cité de la Mer in Cherbourg since May 2002. A series of complex operations was of course carried out beforehand under optimum nuclear security conditions. The remaining nuclear-powered ballistic missile submarines will follow the normal cycle leading to their total elimination.

(b) **Major reductions in the airborne component**: These include the early decommissioning and dismantling of the AN52 nuclear bombs carried by Jaguar and Mirage III aircraft, announced in 1991; and the withdrawal of Mirage IV strategic aircraft from nuclear missions in 1996 (strategic missions were then taken over by the three M2000N and, later, the Rafale squadrons, which joined the strategic air forces at that time). In 2008, France announced its decision to reduce its airborne component by a third. That reduction was completed in 2013; as a result, France's total nuclear armament is less than 300 nuclear warheads. All decommissioned weapons have been dismantled.

(c) **Elimination of the surface-to-surface component**: In 1991, France announced several decisions aimed at reducing its surface-to-surface component: early withdrawal of Pluton short-range missiles (completed in 1993); scaling down of the Hadès missile programme (intended to replace the Pluton missiles) from 120 to 30 units; and elimination of the S45 surface-to-surface missiles, which were to replace the S3D missiles at the Plateau d'Albion. In 1992, the Hadès missile programme, intended to replace the Pluton missiles, was terminated. In 1997, dismantling of the 30 Hadès missiles that had been produced was completed. Thus, the substrategic land component was eliminated. In 1996, the strategic surface-to-surface component in turn was abandoned, as France announced the final withdrawal and dismantling of the Plateau d'Albion surface-to-surface systems. Two years later, in 1998, the dismantling of all S3D missiles was completed. Thus, France is the only State that has had a surface-to-surface nuclear force and subsequently completely dismantled it.

12. In the interests of transparency, the President of the Republic announced, on 19 February 2015, that France had three sets of 16 submarine-borne missiles and 54 improved medium-range air-to-surface delivery systems.

2. Reduction of alert levels

13. France's alert levels have seen as significant a reduction as the size of its nuclear forces. It has twice scaled back its nuclear forces' permanent alert level, in 1992 and in 1996. These reductions were in both the response times of forces and the number of weapons systems on alert. Specifically:

(a) Since 1996, France has kept only one nuclear-powered ballistic missile submarine permanently at sea.

(b) Since the removal of the missiles at Plateau d'Albion, France no longer has capabilities on permanent high alert.

(c) In 1997, France also announced the detargeting of all its nuclear forces. It has consistently reaffirmed that since.

14. France's nuclear posture is not one of "launch on warning" or "launch under attack" or what some commentators call the "hair-trigger alert" posture. Strict procedures have been put in place to ensure that no weapons can be used without an order from the President of the Republic. Alert status and posture decisions are the responsibility of the President of the Republic.

B. Activities relating to the discontinuation of the production of fissile material for weapons, and efforts to promote a treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices

1. Moratorium on the production of fissile material for weapons

15. France stopped producing fissile material in 1992 (plutonium) and 1996 (highly enriched uranium) to support its nuclear weapons programmes. It announced a moratorium on the production of such material in 1996.

2. Dismantling of the former fissile material production facilities for weapons

16. In 1996, France undertook the dismantling of its production units in Marcoule and Pierrelatte. France intended the decommissioning to be complete and irreversible. The decommissioning operations represent a considerable financial investment: a total of €6 billion, €2 billion of which has already been spent.

17. The Pierrelatte enrichment facility has now been fully decommissioned. The operations involved dismantling 4,000 diffusers, 1,330 tons of diffusion barriers, and 1,200 km of piping. Decommissioning of the Marcoule UP1 reprocessing facility began in 1997 and will continue until 2035.

18. Moreover, the first phase of clean-up and dismantling of the G1, G2 and G3 plutonium production reactors at Marcoule has been completed, and the second phase, slated to begin in 2020, will continue until 2035.

3. Commitment to concluding a treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices

19. France sets a high priority on the initiation of negotiations at the Conference on Disarmament on a treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices. Such negotiations are the next logical step, at the multilateral level, in creating the conditions for a world without nuclear weapons in keeping with the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons, and in the context of a realistic approach based on concrete, progressive measures.

20. France takes the view that a fissile material cut-off treaty should place a quantitative limit on arsenals by stopping the production of fissile material for the manufacture of nuclear weapons. Such a treaty would be the indispensable complement to the Comprehensive Nuclear-Test-Ban Treaty. It therefore seems essential that such a treaty cover all countries possessing nuclear weapons today.

21. Pending its entry into force, all States concerned should, as France has done, declare a moratorium on the production of fissile material for nuclear weapons.

22. France is a member of the group of governmental experts established by General Assembly resolution 67/53. It considers that the group's discussions can usefully contribute to the preparation of future negotiations on a legally binding international instrument. On 19 February 2015, the French President announced that France would soon submit a draft treaty to the disarmament community and called on the five nuclear-weapon States to begin negotiations on that instrument without further delay.

C. Activities to end nuclear testing and promotion of the Comprehensive Nuclear-Test-Ban Treaty

1. Complete cessation of nuclear tests

23. France ended all its nuclear tests in 1996. It signed, on 24 September 1996, and ratified, on 6 April 1998, the Comprehensive Nuclear-Test-Ban Treaty.

24. France is carrying out activities aimed at guaranteeing the safety and reliability of its nuclear weapons. These include a simulation programme and hydrodynamic experiments designed to model materials' performance under extreme physical conditions and, more broadly, the weapons' functioning. These activities rigorously respect France's obligations under the Comprehensive Nuclear-Test-Ban Treaty, which bans all nuclear explosions, whatever their yield, and ends the development of new and more advanced types of nuclear weapons. In other words, the simulation programme is designed only to ensure the safety and reliability of existing weapons and in no way to enable the development of new and more advanced types of weapons.

2. Complete and irreversible dismantling of the former Pacific Testing Centre

25. In 1996, at the same time as it ended nuclear testing, France decided to completely and irreversibly dismantle the sites of the Pacific Testing Centre, on the atolls of Mururoa and Fangataufa.

26. The sites were fully decommissioned in 1998; clean-up operations were then conducted to eliminate any radiological risk. A team of experts from the International Atomic Energy Agency (IAEA) conducted an independent, comprehensive and objective evaluation of the present and future radiological conditions of the atolls of Mururoa and Fangataufa and concluded, in its 1998 report *The Radiological Situation at the Atolls of Mururoa and Fangataufa*, that there was no risk. France maintains radiological and geomechanical monitoring of the atolls to this day.

3. Support for the Comprehensive Nuclear-Test-Ban Treaty

27. France actively supports efforts to extend accession to of the Comprehensive Nuclear-Test-Ban Treaty to the States listed in annex 2 to the Treaty and such other States as have not acceded to the Treaty. It has undertaken its own initiatives, particularly in Francophone countries, and participates in the Treaty promotion efforts of the Group of Eminent Persons established in September 2013 by the Executive Secretary of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). It aligns itself with the European Union's support of CTBTO, as stipulated in the decision by the Council of the European Union regarding support for the activities of the Preparatory Commission for CTBTO.

28. France also provides technical support to CTBTO, in particular for the completion of the verification regime provided for under the Treaty. The following actions have been undertaken:

(a) Regarding the international monitoring system, France deploys and operates 17 stations in its territory and provides technical assistance for the operation and maintenance of 8 stations abroad. France also makes a significant contribution to the engineering work necessary to implement the international monitoring system, in particular as regards new technologies such as infrasound (sensors, station engineering, and calibration techniques) and the measurement of noble gases. France's National Data Centre supports the development of the CTBTO International Data Centre by providing software (infrasound data analysis, performance monitoring tools for the network of stations) and by seeking innovative solutions. In that way, France participates actively in the evaluation of the verification regime's effectiveness, maintains close relations with many national data centres and contributes to their development.

(b) Regarding the on-site inspections system, France assists directly with the system's development (inspectors, inspection techniques and the preparation of and participation in major exercises such as Integrated Field Exercise 2014 (IFE14)), and also contributes through research efforts.

III. Transparency and confidence-building measures

29. France is committed to transparency among the five nuclear-weapon States parties to the Treaty on the Non-Proliferation of Nuclear Weapons and vis-à-vis non-nuclear-weapon States. It contributes to transparency efforts unilaterally and on a voluntary basis through:

(a) Regular efforts at transparency regarding its deterrence doctrine and its basic tenets. France sees this as an important contribution to the stability and predictability of relations among nuclear-weapon States and between those States and non-nuclear-weapon States.

(b) Transparency regarding its nuclear forces. The following should be noted in particular:

(i) The announcement that France has fewer than 300 warheads (in total, and not just the number of operational strategic weapons deployed).

(ii) The announcement that France has no nuclear weapons in reserve.

(iii) The announcement (and reminders) of the detargeting of nuclear weapons.

(iv) Pre-launch notification of all space and ballistic missile launches under the International Code of Conduct against Ballistic Missile Proliferation: Between January 2010 and December 2014, France issued 44 pre-launch notifications, equal to the number of French space and missile launches conducted during that period. In addition, a statement is published each year, in keeping with the confidence-building and transparency measures laid down in the International Code of Conduct, outlining French policy on ballistic missiles and spacecraft. Lastly, for the first time in the history of the International Code of Conduct and in fulfilment of one of its provisions, France in 2011 hosted an inspection by international observers at the Guiana Space Centre in Kourou.

(c) Transparency regarding practical disarmament measures taken by France, in particular the dismantling of its nuclear testing facilities in the Pacific and the Pierrelatte and Marcoule facilities for the production of fissile materials for weapons. France organized visits to its former fissile material production facilities on 16 September 2008 by representatives of upwards of 40 States members of the Conference on Disarmament; on 16 March 2009 by non-governmental experts; and on 3 July 2009 by international journalists. Consistent with the same spirit of transparency, the President of the Republic indicated, in his speech on 19 February 2015, that France would soon propose a visit to additional sites from which all nuclear weapons have been removed.

(d) Participation in the efforts of the five nuclear-weapon States parties to the Treaty, led by China, to develop and finalize a glossary of nuclear terminology, comprising 228 terms defined and translated in the four working languages of those States. Issues of definition and nuclear terminology are indeed essential for deepening mutual understanding and facilitating dialogue among the five nuclear-weapon States as well as between those States and the non-nuclear-weapon States.

IV. Other relevant actions

30. Nuclear disarmament makes sense only so long as it does not lead to an arms race in other areas. It needs to be viewed as part of general and complete disarmament, in accordance with article VI of the Treaty. France therefore has also taken major initiatives in other areas of disarmament.

31. France is the depositary State of the 1925 Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare; it is also the country in which the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction was opened for signature in 1993. France has worked towards the universalization of that Convention through national and European initiatives. At the operational level, France supports the efforts of the Organisation for the Prohibition of Chemical Weapons in tackling the exceptional challenge of dismantling the Syrian chemical arsenal.

32. In the framework of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and

on their Destruction, France has for some years been proposing a peer review mechanism. This is an innovative approach the purpose of which is to strengthen one of the main counter-proliferation instruments. In December 2013 in Paris, France conducted a pilot peer review exercise on the national implementation of the Convention.

33. A significant milestone in recent years in the area of conventional weapons was the adoption by the General Assembly, on 2 April 2013, of the Arms Trade Treaty, in the negotiation of which France played a significant role. France signed the Treaty on 3 June 2013; was among the first, alongside its European partners, to ratify it; and has actively worked towards its universalization ever since.

34. France is also a party to the 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, which provides for the destruction of anti-personnel mine stockpiles and the clearance of mined areas, as well as to the 2008 Convention on Cluster Munitions, which contains similar provisions. It has complied with its obligations under the first of these Conventions in advance of the deadlines set therein, and scrupulously respects its obligations under the Convention on Cluster Munitions, having devoted nearly €20 million to the destruction of its stockpiles of cluster munitions.

35. France is also a party to the 1980 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (Convention on Certain Conventional Weapons).

36. During its chairmanship in 2013 and 2014 of the Meeting of the High Contracting Parties to the Convention on Certain Conventional Weapons, France obtained a mandate for the discussion of lethal autonomous weapons systems (so-called "killer robots"). Similar discussions were held during the Meeting of the High Contracting Parties in November 2014.

Section II
National non-proliferation measures

37. The proliferation of nuclear weapons and their means of delivery is a threat to international peace and security, as well as to the regions concerned. France therefore considers it imperative to resolutely oppose such proliferation. France's actions to combat nuclear proliferation and to promote implementation of the Treaty on the Non-Proliferation of Nuclear Weapons and the action plan of the 2010 Review Conference have three strategic priorities: to strengthen the non-proliferation regime; to respond to proliferation crises; and to further develop efforts to prevent and impede proliferation.

I. Implementation of and support for safeguards

38. France is committed to the IAEA safeguards regime, which is at the heart of the non-proliferation regime and the strengthening thereof. France itself is subject to many checks by IAEA and by the European Atomic Energy Community (Euratom).

A. French safeguard commitments

1. Voluntary offer agreement

39. With a view to strengthening the safeguards system, France has offered to make certain civil nuclear material subject to IAEA safeguards. The safeguards are applied under a trilateral agreement between France, Euratom and IAEA (INFCIRC/290), which entered into force in 1981.

2. Communication of additional information

40. France has also voluntarily agreed to transmit additional information to IAEA:

(a) Notification of imports and exports of nuclear material (INFCIRC 207/Add.1, 1984).

(b) Notification of imports and exports of concentrates of uranium and thorium (INFCIRC 415, 1992).

(c) Annual statement of holdings of civil irradiated and unirradiated plutonium and highly enriched uranium (INFCIRC 549, 1998).

3. Additional Protocol

41. To enhance IAEA's ability to detect possible clandestine nuclear activities carried out by non-nuclear-weapon States, France signed an Additional Protocol to its 1998 safeguards agreement (entry into force 30 April 2004). The Additional Protocol is an essential instrument in France's efforts in respect of nuclear non-proliferation. The two following points in the French Additional Protocol warrant special attention:

(a) **Complementary access**: IAEA inspectors may, on at least 24 hours' notice, request access to any location in France — and so to any nuclear facility — in order to resolve any question as to the accuracy and completeness of the information provided pursuant to the provisions of the Protocol, or to resolve certain contradictions in that information and, by cross-referencing, to gather possible evidence of clandestine nuclear activity by a non-nuclear-weapon State. Complementary access methodology, as well as the activities inspectors may engage in during such access (e.g. environmental sampling, measurements), are similar to those provided for in the model additional protocol proposed by IAEA.

(b) **Provision to IAEA of information on cooperation with non-nuclear-weapon States relating to all aspects of the fuel cycle**. For example, France informs IAEA of its plans for nuclear cooperation involving the fuel cycle with non-nuclear-weapon States over the next 10 years.

B. Safeguards inspections by the European Atomic Energy Community

42. Like its European Union partners, France is subject to safeguards inspections by the European Atomic Energy Community (Euratom) relating to all civil nuclear material covered by the Treaty establishing Euratom. As a result, all French facilities holding civil nuclear materials are subject to Euratom inspection. Such inspection seeks to verify that the use of those materials is consistent with that declared by the users.

C. Exemplary inspections of the French civil nuclear cycle

43. Because of the number and diversity of nuclear installations in France, the country is subject to major inspections covering all facilities involved in civil nuclear activities. In 2013, 336 inspections were conducted by Euratom. Such a vast undertaking has made France one of the most closely inspected countries in the world.

44. Sensitive nuclear fuel cycle facilities in France are also subject to IAEA safeguards: the new Georges Besse II enrichment plant has been subject to inspections equivalent to those conducted by IAEA at similar facilities in European non-nuclear-weapon States. Some parts of the La Hague processing and recycling plant and the Melox MOX (a mix of uranium and plutonium oxides) fuel fabrication plant are also subject to IAEA safeguards. These facilities are furthermore subject to Euratom safeguards. Thus, the spent fuel reprocessing plant at La Hague is the European facility most thoroughly inspected in Europe.

45. In 2013, Euratom verification activities in France included 336 inspections; 1,475 person-days of inspection; and the submission of 214,320 accounting items. In the same year, IAEA safeguards activities carried out in France involved 26 inspections; 113 person-days of inspection; submission of 80,000 accounting items; and 18 statements provided under the Additional Protocol (15 for France and 3 for the European Union).

D. Political, technical and financial support for the safeguards

1. Political support

46. France has taken steps to promote the Additional Protocol within the Group of Eight and the Group of Seven. France also actively supports European Union initiatives to promote the Additional Protocol (through financial contributions and targeted approaches).

47. At related meetings of the IAEA Board of Governors and General Conference, France has consistently called for the universalization of the Comprehensive Safeguards Agreement and the additional protocol thereto as the verification standard. France has demonstrated its commitment to continuously enhancing the efficiency and effectiveness of the IAEA safeguards system, in particular through the implementation of safeguards at the State level.

48. France supports the Agency's activities to make States aware of the importance of the principle of stronger, universal safeguards. In 2013, specifically, it contributed financially to the organization of training seminars in Myanmar and in the Lao People's Democratic Republic in preparation for ratification of the additional protocol.

2. Technical and financial support

49. France is committed to the central role played by the IAEA safeguards system and seeks to ensure that IAEA has the requisite human, financial and technical resources to fulfil the mandate from the international community, thus ensuring the credibility of its verification mission.

50. A French support programme for IAEA safeguards was established in 1983 to give concrete expression to France's political support for the verification mission of IAEA. Under that programme, technology transfer, financial contributions and expert advice are provided to help the IAEA Department of Safeguards to make its verification methods more technically and economically efficient.

51. This programme is among the four largest national support programmes; the total value of its activities is estimated to be €1.5 million a year.

52. France has also contributed to the European Union's efforts to support IAEA verifications, specifically:

(a) Decisions of the Council of the European Union regarding support for IAEA activities in the areas of nuclear security and verification.

(b) Contributions to the modernization of IAEA safeguards laboratories as part of the Enhancing Capabilities of the Safeguards Analytical Services (ECAS) project.

E. Permanent safeguards for nuclear transfers required as part of France's civil nuclear cooperation

53. The intergovernmental agreements underlying France's commitment to civil nuclear cooperation with third countries contain specific clauses that make the materials, goods and equipment subject to IAEA safeguards (which apply under agreements concluded by a given country with IAEA). Should those safeguards not be applicable, the parties are expected to implement a mutually agreed system of safeguards, the effectiveness and scope of which are equivalent to those of IAEA. Finally, intergovernmental agreements generally stipulate that the safeguards provisions shall continue to apply even if the agreement is terminated or expires.

II. Export controls

A. France actively participates in international nuclear control regimes

54. As a member of the Zangger Committee and the Nuclear Suppliers Group, France contributes to international counter-proliferation efforts aimed at:

(a) Updating checklists and ensuring their continued relevance given contemporary technological developments.

(b) Raising awareness among non-member States of the need to strengthen export controls.

B. Implementing export control at the national level

55. The bilateral agreements governing the development of France's civil nuclear cooperation with third countries reflect the commitments made by France in the framework of the Nuclear Suppliers Group (e.g. the obligation to obtain assurances from the consignee in case of transfer or retransfer).

56. The common system of controls on exports, transfers, brokering services and transit of double-usage items established at the European Union level by Council Regulation EC No. 428/2009, which provides the checklists of the dual-use items (including software and technology) of all export control regimes, are directly applicable at the national level. The lists are regularly updated to reflect changing technologies and proliferation issues.

57. Finally, the French authorities have recourse as necessary to the "catch-all" clause (provided under the Regulation to allow export control for an unlisted item), for instance, where there is a serious risk that the item may have an application related to weapons of mass destruction.

C. Contribution to national capacity-building efforts

58. France actively supports European Union actions to generalize a European culture of non-proliferation, particularly with the implementation of the New Lines for Action by the European Union in Combating the Proliferation of Weapons of Mass Destruction and their Delivery Systems, adopted in 2008 and renewed at the end of 2013.

59. A significant portion of the budget of the European Union's Chemical, Biological, Radiological and Nuclear Risk Mitigation Centres (totalling over €20 million a year) is devoted to financial, technical and operational assistance to third countries in order to help them strengthen their export control systems.

III. Nuclear security

A. Ratification of international conventions

60. France has been a party to all relevant international instruments in this area since it ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material, on 1 February 2013, and the International Convention for the Suppression of Acts of Nuclear Terrorism, on 11 September 2013.

B. Implementation of IAEA recommendations

61. France has made significant progress on implementing the nuclear security recommendations on physical protection of nuclear materials and nuclear facilities (INFCIRC/225/Rev.5, IAEA Nuclear Security Series No. 13). French regulations incorporate virtually all the provisions of the IAEA circular and go even further in some cases. A peer review mission led by IAEA in Gravelines, France, in November 2011 highlighted the quality of the French nuclear security regime, particularly with regard to the physical protection of materials.

C. Action plan signed with IAEA to support its activities

62. In April 2005, France signed an action plan with IAEA (renewed again in 2013 until 2015) to support IAEA nuclear and radiological security activities, particularly in the areas of cyber-security, strengthening of national nuclear security systems,

physical protection of nuclear material, nuclear material accounting, security of radioactive sources, detection and response.

63. In financial terms, French has contributed support in the amount of €730,000 each year since 2011, for a total of €2.8 million since 2010. An additional €4 million in unearmarked contributions since 2003 have helped to finance the repatriation of radioactive sources. In this context, France has, inter alia, assisted with the identification and securing of French sources exported abroad.

D. Support for peer review missions

64. Besides hosting a peer review mission in November 2011, France organized a seminar in Paris on 4 and 5 December 2013, in cooperation with IAEA, on peer review missions; it was attended by 43 States and international organizations. The seminar was an opportunity to share lessons learned from those missions and to encourage all States that had not yet done so to host such missions. Finally, the French authorities have provided support personnel for the preparation of IAEA missions and training activities.

E. Efforts to minimize highly enriched uranium

65. Since 2010, France has been working with a number of partner States to identify alternative technologies that do not require the use of highly enriched uranium in the production of medical radioisotopes and the manufacture of fuel for high-performance research reactors.

F. Efforts to secure radioactive sources

66. The potential use of radioactive sources for malicious purposes poses a real threat to international security. In 2011, accordingly, France signed an agreement with IAEA to identify sources exported by French companies and to secure those sources in the countries where they are now located or, where that is impossible, to bring them back to France for processing. This work has already resulted in an extensive inventory of high-activity radioactive sources that have been exported; of the 300 sources thus identified, just under 200 require action. The repatriation decision will be taken for each source on a case-by-case basis. Several repatriation operations have already taken place in recent years and exploratory missions are under way for possible repatriations from several new countries.

67. France maintains a firm commitment to securing and repatriating radioactive sources in the context of the Nuclear Security Summit and the Global Partnership against the Spread of Weapons and Materials of Mass Destruction, established by the Group of Eight. France has invested €4 million to these activities, which are ongoing.

68. At the Nuclear Security Summit held in The Hague on 24 and 25 March 2014, the President of the French Republic announced the launch of an initiative to enhance the security of high-activity radioactive sources security through activities in three high-priority areas:

(a) Strengthening of the international framework applicable to these sources by improving the application of existing instruments and by assessing any requirements expected under new instruments.

(b) Reduction of the use of these sources by developing alternative technologies.

(c) Strengthening of cooperation between suppliers of these sources in order to develop common good practices that better address end-of-life management of the sources.

69. In order to begin the practical implementation of these high-priority activities, France has proposed a joint statement, expected to be adopted at the 2016 Nuclear Security Summit within an international framework. It will furthermore co-chair with the United States of America a technical meeting organized by IAEA with a view to identifying and promoting initiatives on alternative technologies not requiring high-activity radioactive sources.

G. Efforts concerning the transport of nuclear material

70. France is also committed to ensuring the safe transport of nuclear material. Together with the Japan and the United Kingdom of Great Britain and Northern Ireland, France initiated, within the framework of IAEA, a constructive dialogue with coastal States which, in September 2013, led to the adoption of a road map for specific actions on the information to be conveyed to those States, particularly in the days preceding transport.

71. In that same vein, on 17 June 2015, France will conduct a security exercise with coastal States within the framework of IAEA. The exercise will test the quality of emergency communication procedures in the event of an incident.

72. Lastly, France actively contributes to the work of the transport working group of the Nuclear Security Summit. In June 2015, it will participate in two simulation exercises on rail and air transport.

IV. Nuclear-weapon-free zones

73. France has long supported the establishment of nuclear-weapon-free zones. The regional approach is an important means of promoting disarmament and non-proliferation.

A. Ratification of protocols to treaties establishing nuclear-weapon-free zones

74. France is a party to the protocols to the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco), to the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), to the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) and to the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Treaty of Semipalatinsk).

75. Regarding the Treaty of Semipalatinsk, France, as one of the five nuclear-weapon States parties to the Treaty, led a fruitful dialogue with the five Central Asian States, which resulted in the signature, in New York, on 6 May 2014, of the Protocol to that Treaty, during the third Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. On 17 October 2014, France also became the first State to ratify the Protocol.

76. By so doing France reiterated to more than 100 States the security assurances it had given unilaterally in its statement of 6 April 1995.

77. In 2012, France and Mongolia signed two parallel declarations on Mongolia's nuclear-weapon-free status.

78. In addition, France is a party to the Antarctic Treaty of 1959, which bans nuclear tests and weapons in Antarctica.

B. Outlook for the signature of new protocols

79. With respect to the South-East Asia Nuclear-Weapon-Free Zone established under the Treaty of Bangkok, France, together with the four other nuclear-weapon States parties to the Treaty, is continuing discussions with the Association of Southeast Asian Nations (ASEAN) to seek solutions acceptable to all stakeholders in response to the difficulties identified. It attended a meeting of experts from ASEAN and from the five nuclear-weapon States parties to the Treaty during the sixty-ninth session of the United Nations General Assembly.

C. Middle East zones free of nuclear weapons, other weapons of mass destruction and their delivery systems

80. From the outset, France has supported the plan to create a Middle East zone free of weapons of mass destruction and their delivery systems. France calls on all States concerned to implement the resolution adopted by the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons in order to make progress towards a lasting peace in the Middle East. At meetings of the First Committee of the General Assembly, it consistently votes in favour of texts supporting that objective.

81. Organization of a conference on that zone is an important measure contained in the action plan adopted by the 2010 Review Conference. Understandably, there was disappointment with the announcement in late 2012 that the conference was to be postponed. However, the cycle is not completed and France continues to support the facilitator, Mr. Jaakko Laajava.

82. In addition, France intends to help create the conditions for achievement of the objectives of the 1995 resolution on the Middle East. It is working toward that goal, in particular, though unrelenting efforts to resolve tensions in the region, especially with respect to the Middle East peace process. It also works to ensure that all States parties to the Treaty fulfil their nuclear non-proliferation obligations. That is the goal being pursued by France, in conjunction with its partners in the Group of Six, in order to reach a negotiated settlement to the Iranian nuclear crisis, which is

threatening peace and security in the region. As the Security Council recalled in its resolutions 1747 (2007), 1803 (2008) and 1929 (2010), on the nuclear situation of the Islamic Republic of Iran, a solution to the Iranian nuclear issue would contribute to global non-proliferation efforts and to realizing the objective of a Middle East free of weapons of mass destruction, including their means of delivery.

83. France is also helping to implement the 1995 resolution on the Middle East by strongly supporting the universalization of the principal non-proliferation instruments, factors for collective security, within the framework of its bilateral relations with the countries of the region and in relevant multilateral forums. It calls on all States that have not yet acceded to the Non-Proliferation Treaty to do so, and to implement it fully. It also urges all States in the region to accede without delay to the other existing conventions and instruments on the non-proliferation of weapons of mass destruction and their delivery systems.

V. Compliance with non-proliferation commitments and other issues

84. Proliferation crises constitute serious threats to international and regional security and stability. They are an obstacle to the development of civil nuclear cooperation. They impede disarmament by undermining mutual trust. With the worsening of these crises, it is more vital than ever to make decisions regarding the consequences of a proven violation of the Treaty or of the abuse of the right of withdrawal.

A. Proliferation crises

1. Islamic Republic of Iran

85. In 2013, during the Iranian proliferation crisis, France negotiated with its partners Germany, the United Kingdom, the European Union, the United States, the Russian Federation and China (E3/EU+3), with a mandate from the Security Council, an interim agreement to halt the progression of the major proliferation aspects of Iran's nuclear programme. Thus, a joint action plan was approved in Geneva on 24 November 2013 and entered into force on 20 January 2014. France and its partners have spared no effort in persuading the Islamic Republic of Iran to agree to significant non-proliferation measures. The implementation of this agreement by the Islamic Republic of Iran is thus far satisfactory, as confirmed by IAEA in its monthly reports. France will ensure that it remains so throughout the implementation process.

86. France is determined to continue its efforts to reach a lasting diplomatic solution based on the restoration of confidence in the exclusively peaceful nature of Iran's nuclear programme. The joint action plan of November 2013 supplies the framework and parameters on the basis of which the E3/EU+3 group and the Islamic Republic of Iran have been negotiating, for over a year now, a long-term agreement on the Iranian nuclear situation. During these negotiations, which have already been extended twice and will continue until 30 June 2015, France stresses the need, within the Group of Six and vis-à-vis the Islamic Republic of Iran, for credible and lasting solutions to be identified in each area. It is indeed crucial to achieve a robust

agreement in order to strengthen the international non-proliferation regime. In that regard, the resolution of the outstanding issues in the Iranian nuclear programme identified by IAEA in 2011 is an important condition for achieving a long-term agreement. It will be essential in enabling IAEA, once an additional protocol is implemented by the Islamic Republic of Iran, to assure the international community that the Islamic Republic of Iran has no undeclared nuclear material or activities.

2. Democratic People's Republic of Korea

87. France is deeply concerned at the continuation by the Democratic People's Republic of Korea of its nuclear and ballistic missile programmes, which have been condemned many times by the Security Council. The objective remains the complete, verifiable and irreversible dismantling of the facilities involved in those programmes and the return of IAEA inspectors without preconditions. In that connection, France stresses in particular that the ballistics dimension of the proliferation activities carried out by the Democratic People's Republic of Korea should not be ignored. Hence, it strongly condemned the ballistic test of December 2012 and the nuclear test of February 2013, both carried out in violation of Security Council resolutions.

88. France actively supports the resumption of dialogue in the framework of the six-party talks, in which it is not involved. For negotiations to resume, however, it is essential for the Democratic People's Republic of Korea to adopt practical, binding measures that demonstrate its willingness to cooperate in achieving the goal of a denuclearized Korean peninsula, and thus rebuild trust. Far from doing so, Democratic People's Republic of Korea has increasingly been issuing provocative statements about its determination to step up the development of its nuclear programme.

B. Withdrawal (article X)

89. France has taken an active part in the debate on withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons (article X) and its consequences occasioned by the announcement by the Democratic People's Republic of Korea on 10 January 2013 of its intention to withdraw from the Treaty.

90. States parties' adoption of measures on that issue, which has been under debate for more than a decade, is essential to the Treaty's credibility and integrity and to the consolidation of the nuclear non-proliferation regime. It is unacceptable for any State having benefited from the provisions and cooperation provided for in article IV to acquire nuclear materials, facilities and technologies to withdraw from the Treaty with impunity and to use the resources so acquired for military purposes, or to withdraw after diverting them from civilian to military purposes in violation of the Treaty.

91. The point of this initiative is not to deny States the right of withdrawal, which is conferred by the Treaty itself in article X. Rather, the point is to recall how that right, which is circumscribed both by the Treaty and by international law, must be exercised, and especially to orchestrate the best possible response by the international community in case of abuse of the right of withdrawal.

92. France has thrown its support behind the proposals made in various working papers, in particular, those of the European Union, the United States, the Russian Federation and Ukraine as well as other States parties. These proposals are in agreement on many points, such as the need for rapid consultations between States parties; the central role of IAEA in verifying compliance with international non-proliferation obligations in advance of such withdrawal; and the importance of maintaining effective control over the nuclear materials and equipment of the State that has given notice of its withdrawal.

VI. Other contributions to the non-proliferation of nuclear weapons

A. Financial oversight

93. France participates in the work of the Financial Action Task Force (FATF) to establish international recommendations for the criminalization of financing of proliferation in all its forms and of complicity in such action. France helped to develop FATF Recommendation 7, adopted in February 2012, which calls on States to implement targeted financial sanctions against any persons financing activities prohibited by Security Council resolutions adopted on the basis of Chapter VII of the Charter of the United Nations.

94. Pursuant to that international Recommendation, France has created in its domestic law a charge of "financing of proliferation" (Law No. 2011-266 of 14 March 2011). The law imposes criminal penalties of up to 20 years in prison and a fine of €7.5 million on any person having provided, collected or managed funds, securities or assets of whatever kind for the conduct of an activity related to proliferation. France encourages States that have not yet done so to strengthen their national legislation accordingly.

B. Counter-proliferation policy

95. France participates in efforts to intercept assets used in proliferation, and in 2003 was among the States that launched the Proliferation Security Initiative. It is a member of the Initiative's Operational Experts Group, and is as such one of the States most invested in counter-proliferation operations.

96. Seeking to enhance the effectiveness of Initiative, France proposed, in April 2013, the creation of a Mediterranean component. The Mediterranean is a major international trade route and one of those most used by proliferating states to acquire various prohibited resources.

97. To implement the Initiative, France is currently organizing, together with Germany, an awareness-raising workshop for all Mediterranean States and States invested in the Mediterranean, on the challenges related to the Mediterranean Sea and the need to expand counter-proliferation efforts.

C. Combating intangible transfers and the dissemination of knowledge and expertise

98. Transfers of expertise and sensitive technology can be hijacked and applied to the proliferation of weapons of mass destruction and their delivery systems.

' 9. To prevent such hijacking, in France, of knowledge and expertise that could contribute to the development of proliferation programmes, whether nuclear, biological, chemical or ballistic, France has now supplemented its legislation for the protection of French scientific and technical potential, established under Decree No. 2011-1425 of 2 November 2011, with a section on counter-proliferation.

D. Support for implementation of Security Council resolution 1540 (2004)

100. France supports the implementation of Security Council resolution 1540 (2004). Since 2004, France has provided assistance in the form of bilateral actions vis-à-vis requesting States and has made voluntary contributions to the Trust Fund for Global and Regional Disarmament Activities, which finances the Committee established pursuant to the resolution.

101. France will shortly provide an updated report on its implementation of resolution 1540 (2004) at the national level, in the light of the considerable strengthening in French law of nuclear, biological and chemical security, as well as of counter-proliferation efforts.

Section III
National measures related to the peaceful uses of nuclear energy

102. Pursuant to Article IV of the Treaty on the Non-Proliferation of Nuclear Weapons, France actively participates in the international community's efforts to share the benefits of civil nuclear energy as safely and securely as possible while ensuring non-proliferation.

I. Promotion of peaceful uses

A. Support for the development of energy applications

1. Sharing of nuclear technologies and expertise

103. France considers at the implementation of a nuclear power programme requires the acquisition of comprehensive state-of-the-art knowledge and skills and the maintenance of a strong nuclear safety and security culture.

104. France has broad nuclear expertise, from which many countries are benefiting in the following areas:

(a) Design and construction of third-generation reactors meeting the most demanding safety and security standards over the whole lifetime of the installation, using a range of different reactors based on the EPR programme (1,650 megawatts electrical (MWe)) and the ATMEA1 reactor (1,100 MWe).

(b) Safe and efficient long-term operation of reactors.

(c) Control of the entire fuel cycle and related services, contributing to secure and sustainable supply and the safe management of materials.

(d) A vital contribution to the development of the nuclear systems of the future (the International Thermonuclear Experimental Reactor (ITER) project; studies for the Advanced Sodium Technological Reactor for Industrial Demonstration (ASTRID), a sodium-cooled fast neutron reactor project; work on low- and medium-power reactors; the Jules Horowitz reactor, currently under construction).

2. Specific institutional services

105. France cooperates with a growing number of countries and pays special attention to the needs of developing countries.

106. France offers those of its partners that wish to develop a nuclear power programme coordinated assistance in the preparation of the necessary infrastructure. The French International Nuclear Agency (AFNI), established in 2008, intervenes in the study, diagnosis, consultancy and training phases to help such countries acquire the skills necessary to conduct their projects under optimal conditions, in coordination with IAEA initiatives. AFNI draws on the expertise of all industrial and institutional actors in the French nuclear sector (the Institute for Radiological Protection and Nuclear Safety, the National Agency for Radioactive Waste Management, AREVA and Électricité de France (EDF)).

3. Priority given to training

107. France has developed a specific training system closely linked to the needs and control of the nuclear industry and to research. The training offered covers all of the professions and skills required in the sector.

108. Foreign students enjoy broad access to the training: every year, approximately 20 per cent of those graduating from French master's programmes in nuclear energy are foreign nationals. The International Institute of Nuclear Energy, which facilitates access to all French training in the area, is the gateway for all foreign students who wish to benefit from such training.

109. French academic programmes are supplemented by France's acceptance of IAEA fellows, professionals and students, for internships in or study visits to hospital services (radiotherapy and nuclear medicine units in particular), research institutes and industry players. In 2014, France hosted 27 people of 16 nationalities for internships and 38 people of 19 nationalities for study visits.

110. In parallel with the September 2014 meetings of the IAEA Board of Governors, France launched a capacity-building initiative on the peaceful uses of nuclear energy. The initiative was designed to strengthen the effectiveness of international cooperation to meet the rising demand for assistance from States participating in training for the first time.

4. Support for international initiatives related to the nuclear fuel cycle

111. During its Presidency of the European Union, France and its European partners made a commitment to a European Union financial participation of up to €25 million in and technical contribution to the establishment of a bank of low-enriched uranium

under the auspices of IAEA. The establishment of the bank was authorized by the IAEA Board of Governors in November 2010; it will foster the development of economically viable nuclear power programmes while limiting the risks of proliferation. France has also supported other initiatives in the field of multilateral nuclear fuel assurance, for example the United Kingdom-led nuclear fuel assurance project and the Angarsk low-enriched uranium reserve proposed by the Russian Federation, both of which were approved by the IAEA Board of Governors.

B. Nuclear applications for development

112. France supports the IAEA technical cooperation programme and the development of nuclear applications for the benefit of all through financial contributions, the provision of expertise and the hosting of interns and professionals for training in various fields, including agronomy, nuclear medicine and environmental protection.

II. Provision of technical assistance through the International Atomic Energy Agency to its member States

113. France actively supports the activities of the Department of Nuclear Energy for the development of the infrastructure necessary for the establishment of a nuclear power programme through the provision of experts and financial contributions and the organization of training or technical meetings in France.

114. The IAEA technical cooperation programme supports member States' efforts to acquire nuclear technology. France supports the programme through participation of its experts in projects and through extrabudgetary contributions, in addition to its contribution to the Technical Cooperation Fund, for the funding of "footnote-a/" projects, i.e. those which were unfunded when the programme was approved. Between 2005 and 2013, France helped to fund 18 technical cooperation projects.

115. Health is a priority action area for France, which makes regular financial contributions to the Agency's Programme of Action for Cancer Therapy; receives and treats radiation accident victims in specialized units; supports the Department of Nuclear Sciences and Applications research programmes designed to combat infectious diseases; and sponsors partnerships between IAEA and French institutions such as the Development Research Institute and the National Cancer Institute.

116. France is also active in the development of nuclear technologies with applications in agriculture and environmental protection. It participates, for example, in the financing of technical cooperation projects in Africa designed to improve crop production through advanced irrigation techniques.

III. Nuclear safety and nuclear liability

A. Action to strengthen the safety framework

117. France considers that the magnitude of the accident at the Fukushima Daiichi nuclear plant and its consequences has confirmed the need for a policy of making nuclear safety and transparency absolute requirements. The French authorities have

always advocated for improving nuclear safety worldwide, maintaining it at the highest level and fostering the development of a responsible nuclear energy sector at the international level.

1. On French territory

118. In 2011 and 2012 France carried out additional safety evaluations, not only of nuclear reactors but also of research facilities and factories involved in the nuclear fuel cycle. A national action plan, published in December 2012 by the Nuclear Safety Authority following those evaluations, was peer reviewed at the European level.

119. France has also hosted the following IAEA nuclear safety peer review missions: one Operational Safety Review Team (OSART) mission per year and a new Integrated Regulatory Review Service (IRRS) mission in 2014. Because the IRRS and OSART peer review missions on French soil were conducted in a spirit of transparency, France published their reports and the schedule of past and planned missions.

120. Lastly, France has sought to enhance its preparedness and its response to nuclear and radiological crises by drawing up and disseminating a national crisis management plan. The operators of nuclear facilities have also participated in this effort by establishing emergency response teams (the EDF Force d'Action Rapide du Nucléaire and the AREVA Force d'Intervention Nationale).

2. At the international level

(a) Support for the International Atomic Energy Agency

121. France contributed to the definition and implementation of the IAEA Action Plan on Nuclear Safety. Subsequently, in December 2012, it published a national version of the IAEA Action Plan. The national version was updated in May 2014.

122. The strengthening of international cooperation in the field of preparedness for and response to nuclear and radiological emergencies is also essential. Among other support actions, France has provided summary considerations in the form of nine concrete proposals designed to redefine the operational role and capacities of the IAEA Incident and Emergency Centre (IEC).

(b) Strengthening of the international safety framework

123. France is committed to the universalization and strengthening of the international conventions related to nuclear safety. It therefore actively participated in the working group on effectiveness and transparency, responsible for making proposals to strengthen the Convention on Nuclear Safety, and in the process of the diplomatic conference to consider a proposal to amend the Convention on Nuclear Safety, held on 9 February 2015, which resulted in the Vienna Declaration on Nuclear Safety.

(c) Cooperation in the field of regulatory assistance

124. The French Nuclear Safety Authority provides regulatory assistance to third States through bilateral cooperation actions or through multilateral instruments, to help such States to establish a solid safety regulatory framework and an independent safety authority, and to develop a culture of safety.

B. Nuclear liability

125. France supports the establishment of a global nuclear liability regime. The existence of an adequate liability regime for nuclear operators in case of accidents is an essential condition for the responsible and sustainable development of nuclear energy. The universalization of such a regime is a major objective of the IAEA Action Plan on Nuclear Safety.

126. France and the United States initiated discussions regarding the bases and conditions for the establishment of a global liability regime for nuclear damage, which resulted in the signature of a joint statement in August 2013. The statement reflects the two countries' shared priorities in relation to the fundamental question of compensation for nuclear damage. It affirms their commitment to helping establish and develop a global nuclear liability regime based on treaty relations between States and enabling fair compensation for victims of nuclear accidents, as recommended in the IAEA Action Plan on Nuclear Safety, and encourages States to join such a regime.

127. France considers that the Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention), associated with the Convention Supplementary to the Paris Convention on Third Party Liability in the Field of Nuclear Energy, and the Vienna Convention on Civil Liability for Nuclear Damage, in their revised versions, as well as the Joint Protocol relating to the Implementation of the Vienna Convention and Paris Convention, constitute an adequate basis for the compensation of nuclear damage.

IV. Other matters

128. France has made transparency and public information an essential part of its nuclear policy through:

(a) A strict policy of transparency and collective participation in the implementation of its nuclear projects, reinforced by Law No. 2006-686 of 13 June 2006 on nuclear transparency and safety, which established in particular a high committee for transparency and information regarding nuclear safety and bolstered the 53 local information committees.

(b) Sustained communication on matters related to nuclear energy.

NPT/CONF.2015/11

2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Distr.: General
9 March 2015

Original: English

New York, 27 April-22 May 2015

Implementation of the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Report submitted by Finland

Introduction

1. The Treaty on the Non-Proliferation of Nuclear Weapons is the cornerstone of the global nuclear non-proliferation regime and an essential element of international security. Finland is strongly committed to the pursuit of nuclear disarmament, the non-proliferation of nuclear weapons and peaceful uses of nuclear energy. The three pillars are of equal importance and mutually reinforcing. All States parties share a collective responsibility to maintain the Treaty's credibility by achieving its goals.

2. Finland reaffirms its commitment to the Treaty on the Non-Proliferation of Nuclear Weapons in all its aspects and the ultimate goal of eliminating all nuclear weapons. The universalization of the Treaty and full compliance with the Treaty's provisions are of utmost importance.

3. Step 12 of the 13 practical steps agreed upon at the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons calls for regular reports, within the framework of the strengthened review process for the Treaty, by all States parties on the implementation of article VI and paragraph 4 (c) of decision 2 adopted by the 1995 Review and Extension Conference entitled "Principles and objectives for nuclear non-proliferation and disarmament". This call was reiterated in action 20 of the action plan adopted by the 2010 Review Conference. In line with this commitment, and with a view to contributing to transparency and building confidence, Finland submits the present report focusing on the national implementation of the Final Document of the 2010 Review Conference.

Nuclear disarmament

4. Finland welcomes the efforts made by the nuclear-weapon States to reduce their nuclear arsenals. However, several thousand nuclear weapons still exist, and we call upon nuclear-weapon States to negotiate and finalize further and deeper cuts in their nuclear arsenals, including tactical/non-strategic nuclear weapons, without

15-03651 (E) 020415

Please recycle

further delay. Finland continues to urge the nuclear-weapon States to fully implement their obligations under article VI of the Treaty and to engage in negotiations on further steps towards nuclear disarmament. Finland appreciates the coordination, further transparency and confidence-building among the nuclear-weapon States parties to the Treaty and their efforts in producing a nuclear disarmament glossary. This work can pave the way for further steps in nuclear disarmament.

5. Finland is of the view that security cannot be based on nuclear and other weapons of mass destruction and recalls that, in accordance with the 2010 action plan, all States parties are committed to pursue policies that are fully compatible with the Treaty and the objective of achieving a world without nuclear weapons.

6. Finland expresses its deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons. Finland participated in the three conferences on the humanitarian impact of nuclear weapons, hosted by the Governments of Norway, Mexico and Austria, respectively. The three conferences further enhanced our common understanding of the humanitarian impact of nuclear weapons. At the sixty-ninth session of the General Assembly, Finland joined the two statements on the humanitarian consequences, which it considers complementary and mutually reinforcing. Eliminating nuclear weapons is only possible through substantive and constructive engagement with those States that possess nuclear weapons.

7. The stalemate in the Conference on Disarmament remains a serious concern. This historically productive and valuable body should once again begin its work and start negotiating disarmament treaties. Finland has called for a revitalization of the Conference on Disarmament by reviewing its working methods as well as by enlarging its membership, while at the same time aiming for consensus-building.

8. Finland attaches great importance to the prompt launching of the negotiations on a treaty banning the production of fissile material for nuclear weapons purposes. Finland is pleased to have been able to provide expertise for the work of the group of governmental experts on the fissile material cut-off treaty. This work should lay the ground for future efforts on the treaty.

9. Finland participated as a "friend of the Chair" in the work of the Open-ended Working Group created by the General Assembly in its resolution 67/56 to develop proposals to take forward multilateral nuclear disarmament negotiations. The Working Group delivered its consensus report (A/68/514) to the General Assembly in the fall of 2013.

10. The Finnish Minister for Foreign Affairs, Mr. Erkki Tuomioja, participated in the high-level meeting of the General Assembly on nuclear disarmament held in September 2013.

11. Finland considers the promotion of the entry into force and implementation of the Comprehensive Nuclear-Test-Ban Treaty to be of the utmost urgency as a key non-proliferation and disarmament measure. As one of the "friends of the CTBT", Finland has underlined the importance of the entry into force of the Treaty by co-organizing the Ministerial Meeting in Support of the Comprehensive Nuclear-Test-Ban Treaty on the margins of the General Assembly. Finland has participated actively in the work of the Preparatory Commission and its subsidiary working

groups. A primary seismological station and a radionuclide laboratory are located on Finnish territory as part of the international monitoring system.

12. As civil society should be an integral part of disarmament and non-proliferation discussions, Finland has encouraged and supported the participation of civil society in the proceedings of the First Committee of the General Assembly, the Conference on Disarmament, the Treaty on the Non-Proliferation of Nuclear Weapons, the Open-ended Working Group and the humanitarian initiative.

13. In accordance with action 22 of the 2010 action plan, Finland has implemented the recommendations contained in the report of the Secretary-General (A/57/124) regarding the United Nations study on disarmament and non-proliferation education by forming and funding a study trip for a group representing a new generation of scholars in disarmament and non-proliferation studies.

Nuclear non-proliferation

14. Nuclear-weapon proliferation continues to be a serious concern and the international community should take appropriate measures in the cases of non-compliance in order to preserve the integrity of the non-proliferation regime and its cornerstone, the Treaty on the Non-Proliferation of Nuclear Weapons.

15. The international safeguards system of the International Atomic Energy Agency (IAEA) is an indispensable part of the nuclear non-proliferation regime. Finland has consistently underlined that the IAEA Comprehensive Safeguards Agreement, together with the Additional Protocol, should be accepted universally as the international verification standard. Finland considers that the Comprehensive Safeguards Agreement, together with the Additional Protocol, represents the verification standard pursuant to article III (1) of the Treaty. Finland calls upon all States that have not yet done so to sign and to ratify the Additional Protocol without delay.

16. Finland has concluded a comprehensive safeguards agreement with IAEA and has signed and ratified the Additional Protocol.

17. Finland supports further implementation of the IAEA safeguards system based on the State-level concept. Consistent and universal implementation of the State-level concept will further strengthen the efficiency and effectiveness of the IAEA safeguards system and will thus contribute to global non-proliferation efforts.

18. In Finland, new nuclear power plants and new types of nuclear facilities, like the final disposal facility for spent nuclear fuel and its encapsulation plant, are under licensing and construction. Finland is implementing Safeguards by Design, which brings the IAEA safeguards in at a very early phase of nuclear facility planning and design, starts the discussion between supplier, State and IAEA and confirms the effective implementation of safeguards in the new facility. The new and new type of facilities will meet strict safety, security and safeguards requirements, which creates overall safety of the facilities during their lifetime.

19. Finland continues to provide extrabudgetary support to the IAEA safeguards. Through the National Safeguards Support Programme, Finland has contributed €863,000 to the IAEA safeguards since 2010.

20. Finland has provided a financial contribution of €400,000 for the implementation of IAEA monitoring and verification activities in the Islamic Republic of Iran in relation to the Joint Plan of Action. Finland strongly supports the ongoing efforts to seek a diplomatic solution to the Iranian nuclear issue and the work of IAEA under the Framework for Cooperation.

21. Finland is a member of all relevant export control regimes, such as the Nuclear Supplier Group and the Zangger Committee, and supports the strengthening of their guidelines and understandings. Finland welcomes increasing adherence to export controls with a view to strengthening the global nuclear non-proliferation regime.

22. Finland supports Security Council resolution 1540 (2004) and is committed to its effective implementation. In this regard, Finland is implementing European Union regulation No. 428/2009 on control of experts at the national level. Finland has also enhanced coordination between national authorities and raised awareness about proliferation risks and about the Council resolution among State authorities and the public. Finland has provided assistance to other States through contributions to the Group of Eight Global Partnership.

23. Since 2010, Finland has contributed over €1.5 million to the Second Line of Defence programme under the Nuclear Smuggling Outreach Initiative. For example, in 2014 Finland's contributions were channelled to Second Line of Defence implementation efforts at the vehicle border crossing stations along Ukraine's border with the Republic of Moldova.

24. Finland is strongly committed to strengthening nuclear security worldwide. Finland has ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material and encourages all States to do so. Finland continues to provide financial and in-kind support to the IAEA nuclear security activities. Since 2010, Finland has contributed €250,000 to the IAEA Nuclear Security Fund.

25. The Nuclear Security Summit process has contributed to the visibility of the issue and brought it to the highest political level. Finland has actively taken part in the Nuclear Security Summit process and in other relevant international processes. Combating nuclear terrorism is a priority and Finland contributes to this work by hosting the plenary of the Global Initiative to Combat Nuclear Terrorism, to be held in June 2015.

Peaceful uses of nuclear energy

26. Finland exercises the right under article IV of the Treaty to develop research, production and use of nuclear energy for peaceful purposes in conformity with articles I, II and III. Nuclear power is an important part of Finland's national energy mix.

27. Finland is a strong supporter of IAEA as it is a key player in guaranteeing that countries developing their capacities in the peaceful applications of nuclear energy do so under the best safety, security and non-proliferation conditions. Even at times of economic and budgetary constraint, Finland has supported programme-driven funding for IAEA and paid its assessed contributions to the IAEA regular budget and the Technical Cooperation Fund in full and on time. In addition to the regular assessed contributions. Finland has provided extrabudgetary funding and in-kind support for IAEA.

28. For Finland, nuclear safety is an issue that is global in nature and strengthening nuclear safety deserves the commitment of all States parties to the Treaty. Finland is a State party to all international conventions in the field of nuclear safety. Finland attaches great importance to further improvement of nuclear safety and has consistently supported the IAEA activities in this area.

29. Furthermore, Finland supports rapid and complete implementation of the IAEA Action Plan on Nuclear Safety, which was adopted in September 2011. The plan contains useful tools to strengthen nuclear safety, such as conducting peer review missions on a regular basis and greater transparency by national authorities in the publication of their reports. Finland has made extensive use of the IAEA safety services and encourages other States to make full use of them.

30. Finland became a member of the United Nations Scientific Committee on the Effects of Atomic Radiation in 2011.

The Middle East, particularly implementation of the 1995 resolution on the Middle East

31. In support of the Treaty and the implementation of the 2010 action plan, Finland offered to host the conference on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction in 2012. Finland was chosen as the host country and in October 2011, Under-Secretary of State Jaakko Laajava from the Ministry for Foreign Affairs of Finland was appointed by the Secretary-General and the co-conveners as the facilitator for the Conference, to be held in Helsinki.

NPT/CONF.2015/12

2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Distr.: General
13 March 2015

Original: English

New York, 27 April-22 May 2015

Report on the activities of Australia in support of the implementation of the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

15-03944 (E) 090415

Please recycle

I. Nuclear disarmament

A. Principles and objectives: *The Conference resolves that:*

Action 1 — All States parties commit to pursue policies that are fully compatible with the Treaty on the Non-Proliferation of Nuclear Weapons and the objective of achieving a world without nuclear weapons.

The long-standing commitment of Australia to the Treaty and the objective of achieving a world without nuclear weapons remains undiminished. We hold ourselves to the highest standards of compliance with our non-proliferation obligations. Our advocacy of nuclear disarmament and non-proliferation has included a comprehensive ban on nuclear tests (the Comprehensive Nuclear-Test-Ban Treaty, which Australia ratified in July 1998) and negotiations on a treaty to cap the production of fissile materials. Australia has also continued its prominent and active role on non-proliferation and disarmament through membership in the 12-nation Non-Proliferation and Disarmament Initiative, which it founded together with Japan in 2010. The key objective of the Initiative is specifically to take forward the 64-point action plan from the 2010 Nuclear Non-Proliferation Treaty Review Conference, which was agreed by consensus and includes most of the steps required to advance the disarmament and non-proliferation objectives encapsulated by the Treaty.

Australia actively supported and participated as a Friend of the Chair, contributed a joint building-block paper and moderated several sessions in the Open-Ended Working Group process in 2013 to advance nuclear disarmament negotiations, as established by General Assembly resolution 67/56 of 3 December 2012.

The Initiative has submitted a number of working papers during the 2015 Review Conference cycle, calling for concrete steps towards the elimination of nuclear weapons. The Initiative submitted a comprehensive working paper for the 2015 Review Conference which includes recommendations to strengthen language and commitments across the three pillars. Our "Nuclear Disarmament Post-New START" working paper for the 2014 Preparatory Committee welcomed the ongoing implementation of the New START Treaty but called for further rounds of cuts, and

		called upon all nuclear-weapon States and other States possessing nuclear weapons to take further steps to reduce their arsenals. The Initiative also submitted a paper in 2014 calling on the nuclear-weapon States to reduce the operational status of nuclear weapons systems, pursuant to actions 5 (e) and 5 (f) of the 2010 Action Plan (the "De-alerting" working paper). At the 2013 Preparatory Committee, the Initiative submitted papers urging the inclusion of non-strategic nuclear weapons in any future nuclear disarmament process and calling on nuclear-weapon States to reduce the role of nuclear weapons in national security policies ("Reduced Role of Nuclear Weapons" working paper). The concerns of Australia about the humanitarian consequences of nuclear weapons use has underpinned our actions in seeking practical and achievable ways to moving towards a world without nuclear weapons. Australia issued joint statements at both the sixty-eighth and sixty-ninth sessions of the General Assembly with 16 and 19 other States respectively, underlining that the issue of the humanitarian impact of nuclear weapons use is an integral part of the global disarmament and non-proliferation process. Australia participated in all three conferences on the Humanitarian Impact of Nuclear Weapons, in Oslo (2012), Nayarit (2014) and Vienna (2014).
Action 2	All States parties commit to apply the principles of irreversibility, verifiability and transparency in relation to the implementation of their treaty obligations.	Australia reaffirms its commitment to apply the principles of irreversibility, verifiability and transparency in relation to the implementation of its Treaty obligations. The country's support, inter alia, for the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, the negotiations of a fissile material cut-off treaty, International Atomic Energy Agency (IAEA) safeguards, nuclear-weapon-free zones and transparency through reporting are consistent with that commitment. Australia, along with the other 11 members of the Non-Proliferation and Disarmament Initiative, submitted working papers on nuclear-weapon States transparency to the 2012 and 2014 Preparatory Committees. The working

paper to the 2012 Preparatory Committee included a draft reporting template for nuclear-weapon States.

The Initiative also submitted a working paper on non-nuclear-weapon States transparency to the 2015 Review Conference, which included a draft reporting template for non-nuclear-weapon States.

Australia participated in several rounds of Initiative outreach to the P-5 in Geneva (2014), New York (2014) and London (2015), which afforded further opportunities to underline the importance of transparency.

B. Disarmament of nuclear weapons: *The Conference resolves that:*

Action 6	All States agree that the Conference on Disarmament should immediately establish a subsidiary body to deal with nuclear disarmament, within the context of an agreed, comprehensive and balanced programme of work.	As a member of the Conference on Disarmament, Australia supports the establishment of a subsidiary body to deal with nuclear disarmament, within the context of an agreed, comprehensive and balanced programme of work. Australia has consistently called for the adoption by the Conference of a programme of work which would provide for the implementation of that action. Australian Foreign Minister Julie Bishop, in a speech to the Conference on 26 March 2014, called on all members to unblock the Conference on Disarmament and agree on a programme of work. Australia worked actively and constructively as co-vice chair of the Informal Working Group, through the offices of Ambassador Peter Woolcott, with the mandate to "adopt and implement a programme of work" in the 2013 and 2014 Conference sessions. Australia continues to support efforts within the Conference in 2015 to resume substantive work.

C. Security assurances: *Without prejudice to efforts with the Treaty on the Non-Proliferation of Nuclear Weapons, the Conference resolves that:*

Action 7	All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin discussion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, to discuss substantively, without limitation, with a view to elaborating recommendations dealing with all aspects of this issue, not excluding an internationally legally binding instrument. The Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.	As a member of the Conference on Disarmament, Australia supports the discussion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, within the context of an agreed, comprehensive and balanced programme of work. Australia has consistently called for the adoption by the Conference of a programme of work which would provide for the implementation of this action. The Minister for Foreign Affairs of Australia attended the high-level meeting in New York on 24 September 2010 and registered the country's strong concern about the continuing failure of the Conference to resume substantive work. Foreign Minister Julie Bishop repeated that call in an address to the Conference on 26 March 2014. Australia worked actively and constructively as co-vice chair of the Informal Working Group with the mandate to "adopt and implement a programme of work" in both the 2013 and 2014 sessions to find consensus on a Conference programme of work. We, as part of the Non-Proliferation and Disarmament Initiative, produced a working paper on "Nuclear-weapon-free zones and negative security assurances" for the 2013 Preparatory Committee. That paper underlined the legitimate interest non-nuclear-weapon States have in receiving unequivocal and legally binding security assurances.
Action 9	The establishment of further nuclear-weapon-free zones, where appropriate, on the basis of arrangements freely arrived at among States of the region concerned, and in accordance with the 1999 guidelines of the United Nations Disarmament Commission, is encouraged. All concerned States are encouraged to ratify the nuclear-weapon-free zone treaties and their relevant protocols, and to constructively consult and cooperate to bring about the entry into force of the relevant legally binding protocols of all such nuclear-weapon-free zones treaties, which include negative security	Australia is a strong supporter of nuclear-weapon-free zones freely arrived at by Member States. Australia was an early champion of the South Pacific Nuclear Free Zone Treaty and ratified that Treaty on 11 December 1986. Australia advocates for all countries of the region to join the South Pacific Nuclear Free Zone Treaty and continues to encourage the United States of America to ratify the Treaty's protocols without reservation.

	assurances. The concerned States are encouraged to review any related reservations.	Australia supports dialogue between the members of the Association of Southeast Asian Nations and the nuclear-weapon States on signature by the nuclear-weapon States of the Protocol to the Treaty on the Southeast Asia Nuclear Weapon-Free Zone. Australia also welcomed the establishment of a Central Asian nuclear-weapon-free zone and the signing by the nuclear-weapon States of the protocols to that Treaty. Australia co-sponsors the annual General Assembly resolution (most recently resolution 69/26) on the African Nuclear-Weapon-Free Zone Treaty. Australia continues to support the establishment of a Middle East zone free of nuclear weapons and other weapons of mass destruction, freely arrived at by regional States. The Australian Government supports constructive efforts towards the convening of a conference to discuss such a zone. As part of the Initiative, Australia submitted a working paper on "Nuclear-weapon-free zones and negative security assurances" to the 2013 Preparatory Committee, and a working paper on "Establishing a weapons-of-mass-destruction-free zone in the Middle East" to the 2014 Preparatory Committee. Those papers underlined that nuclear-weapon-free zones are an important means for enhancing global and regional peace and security.
D. Nuclear testing: *The Conference resolves that:*		
Action 11	Pending the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, all States commit to refrain from nuclear-weapon test explosions or any other nuclear explosions, the use of new nuclear weapons technologies and from any action that would defeat the object and purpose of that Treaty, and all existing moratoriums on nuclear-weapon test explosions should be maintained.	Australia has enacted national legislation (the Comprehensive Nuclear Test-Ban Treaty Act 1998 and the Non-Proliferation Legislation Amendment Act 2003) implementing the obligations of the Comprehensive Nuclear-Test-Ban Treaty, in preparation for its entry into force. Through that legislation, a ban on nuclear testing is in force.

Action 12	All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty recognize the contribution of the conferences on facilitating the entry into force of that Treaty and of the measures adopted by consensus at the Sixth Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, held in September 2009, and commit to report at the 2011 Conference on progress made towards the urgent entry into force of that Treaty.	The Minister for Foreign Affairs outlined the activities of Australia in pursuit of the entry into force of the Comprehensive Nuclear-Test-Ban Treaty during the 2011 Article XIV Conference in New York on 23 September 2011.
Action 13	All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty undertake to promote the entry into force and implementation of that Treaty at the national, regional and global levels.	Australia, as co-chair of the Friends of the Comprehensive Nuclear-Test-Ban Treaty group, which convenes a high-level meeting biannually during Leaders' Week of the General Assembly, consistently urges States that have yet to do so to sign and/or ratify that Treaty. Australia chaired the Friends of the Comprehensive Nuclear-Test-Ban Treaty meeting in New York on 27 September 2012 and co-chaired the meeting in 2014. With Mexico and New Zealand, Australia is lead sponsor of the annual General Assembly resolution (most recently resolution 69/81), which stresses the fundamental importance of the Comprehensive Nuclear-Test-Ban Treaty to nuclear disarmament and non-proliferation and urges its earliest entry into force. Australia underlined the importance of maintaining international momentum towards that Treaty's entry into force at the ninth Article XIV conference in April 2014. Australia, with the other members of the Vienna Group of 10, presented a working paper on "Vienna issues" to the 2014 Preparatory Committee and 2015 Review Conference, which covers, inter alia, Comprehensive Nuclear-Test-Ban Treaty issues.
Action 14	The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization is to be encouraged to fully develop the verification regime for the Comprehensive Nuclear-Test-Ban Treaty, including early completion and provisional operationalization of the international monitoring system in accordance with the mandate of the Preparatory Commission, which should, upon entry into	Australia hosts the third-largest number of monitoring stations (21) of the Comprehensive Nuclear-Test-Ban Treaty's International Monitoring System. Australia also actively supports the Comprehensive Nuclear-Test-Ban Treaty Organization in developing other aspects of its verification regime, including a leading role in developing on-site inspection procedures.

	force of that Treaty, serve as an effective, reliable, participatory and non-discriminatory verification system with global reach, and provide assurance of compliance with that Treaty.	Australia works with the Organization through technical workshops and other outreach measures to promote the development of and cooperation between National Data Centres. Australia consistently calls on all States to provide strong financial, technical and political support to the Organization for its work on the Comprehensive Nuclear-Test-Ban Treaty verification regime.
E. Fissile materials: *The Conference resolves that:*		
Action 15	All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin negotiation of a treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices in accordance with the report of the Special Coordinator of 1995 (CD/1299) and the mandate contained therein. Also in this respect, the Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.	Australia is a strong proponent for the commencement of negotiations for a treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices, commonly known as a fissile material cut-off treaty. The then-Minister for Foreign Affairs attended the high-level meeting in New York on 24 September 2010 and registered the country's strong concern about the continuing failure of the Conference on Disarmament to resume substantive work. In 2011, Australia and Japan co-hosted, and in 2012 Australia participated in, a series of experts' side events in Geneva to discuss technical aspects of such a treaty and to help build confidence and momentum for a start to negotiations in the Conference. Australia is a member of the Group of Governmental Experts on a fissile material cut-off treaty, which has met on three occasions in 2014 and 2015 and will shortly finalize its report for submission to the Security Council. In turn, that report will be considered by both the General Assembly and the Conference on Disarmament.
Action 17	In the context of action 16, all States are encouraged to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.	Australia, with the other 11 members of the Non-Proliferation and Disarmament Initiative, submitted a working paper to the 2013 Preparatory Committee on "wider application of safeguards in the nuclear-weapon States" which included a recommendation on nuclear-weapon States placing "excess" nuclear material under IAEA verification in a manner to

		make it irreversible. The Initiative working paper submitted to the 2015 Review Conference also covered that issue.
Action 18	All States that have not yet done so are encouraged to initiate a process towards the dismantling or conversion for peaceful uses of facilities for the production of fissile material for use in nuclear weapons or other nuclear explosive devices.	Australia has never had facilities for the production of fissile material for use in nuclear weapons or other nuclear explosive devices.

F. Other measures in support of nuclear disarmament: *The Conference resolves that:*

Action 19	All States agree on the importance of supporting cooperation among Governments, the United Nations, other international and regional organizations and civil society aimed at increasing confidence, improving transparency and developing efficient verification capabilities related to nuclear disarmament.	Australia and the other 11 members of the Non-Proliferation and Disarmament Initiative presented a working paper on "Increased transparency in nuclear disarmament" to the 2014 Preparatory Committee. The paper underlined the importance of nuclear-weapon States agreeing on a standard reporting form to meet their disarmament-reporting obligations. Nuclear-weapon State transparency was also covered in the Initiative working paper which was submitted at the 2015 Review Conference. In 2013, Australia participated in technical discussions on the development of disarmament verification methods. Australia participated in the 19 and 20 March 2015 inaugural meeting of the International Partnership for Nuclear Disarmament Verification in Washington, D.C.
Action 20	States parties should submit regular reports, within the framework of the strengthened review process for the Treaty, on the implementation of the present action plan, as well as of article VI, paragraph 4 (c), of the 1995 decision entitled "Principles and objectives for nuclear non-proliferation and disarmament", and the practical steps agreed to in the Final Document of the 2000 Review Conference, and recalling the advisory opinion of the International Court of Justice of 8 July 1996. (This field can be used for reporting on implementation of relevant decisions agreed prior to 2010.)	The previous report of Australia on implementation of article VI, paragraph 4 (c) of the 1995 decision entitled "Principles and objectives for nuclear non-proliferation and disarmament" was in NPT/CONF.2010/36 of 7 May 2010. The present report updates our 2012 written report, 2013 verbal update and 2014 written report on Australian activities in support of the 2010 Action Plan. Australia, along with the other 11 members of the Non-Proliferation and Disarmament Initiative, also submitted a working paper on non-nuclear-weapon State transparency to the 2015 Review Conference, which includes a draft reporting template for non-nuclear-weapon States.

Action 21	As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security. The Secretary-General of the United Nations is invited to establish a publicly accessible repository, which shall include the information provided by the nuclear-weapon States.	Australia, with the other 11 countries in the Non-Proliferation and Disarmament Initiative, submitted a working paper to the 2012 Preparatory Committee on "transparency of nuclear weapons", which included a draft nuclear disarmament reporting form for use by nuclear-weapon States. The Initiative submitted a working paper to the 2014 Preparatory Committee on increased transparency, calling on nuclear-weapon States to agree on a standard reporting form and use it to implement action 20 and action 5. The Initiative working paper submitted to the 2015 Review Conference also covered nuclear-weapon State reporting. Following the 2014 Preparatory Committee, when the nuclear-weapon States submitted their national reports, the Initiative conducted further outreach to those States, underlining the importance of improved nuclear-weapon State transparency and regular reporting.
Action 22	All States are encouraged to implement the recommendations contained in the report of the Secretary-General of the United Nations (A/57/124) regarding the United Nations study on disarmament and non-proliferation education, in order to advance the goals of the Treaty in support of achieving a world without nuclear weapons.	Australia welcomes the recommendations in the report of the Secretary-General regarding the United Nations study on disarmament and non-proliferation education (A/57/124). In September 2011, the Non-Proliferation and Disarmament Initiative announced it would actively promote disarmament and non-proliferation education to achieve a world free of nuclear weapons. The Initiative produced separate working papers on that issue for the 2012 and 2013 Preparatory Committees. Australia joined Japan, along with 30 other countries, as a co-sponsor for a statement on disarmament and non-proliferation education delivered to the 2013 Preparatory Committee. We again supported the initiative of Japan in 2014.
II. Nuclear non-proliferation		
Action 23	The Conference calls upon all States parties to exert all efforts to promote universal adherence to the Treaty, and not to undertake any actions that can negatively affect prospects for the universality of the Treaty.	In bilateral exchanges and statements in multilateral forums, Australia has consistently called for all non-Treaty States to join the Treaty as non-nuclear-weapon States and without preconditions. Australia has also conducted regional outreach activities promoting adherence to and fulfilment of Treaty commitments, including through hosting capacity-building courses and workshops in Australia.

		The Non-Proliferation and Disarmament Initiative submitted a working paper on "addressing withdrawal from the Treaty" to the 2014 Preparatory Committee. Both the Initiative and the Vienna Group of 10 working papers submitted to the 2015 Review Conference also include consideration of article X.
Action 24	The Conference re-endorses the call by previous review conferences for the application of IAEA comprehensive safeguards to all source or special fissionable material in all peaceful nuclear activities in the States parties in accordance with the provisions of article III of the Treaty.	Australia was the first country to sign and ratify the additional protocol (entry into force on 12 December 1997), the first to make it a condition of supply for uranium exports and the first for which IAEA was able to declare that all nuclear materials and activities of safeguards relevance had been appropriately declared and accounted for. Australia continues to work to promote the universalization of and adherence to comprehensive safeguards agreements and additional protocols for all Non-Proliferation Treaty non-nuclear-weapon States. Australia, along with the other members of the Vienna Group of 10, submitted a working paper to the 2015 Review Conference which included the issues of compliance and verification.
Action 25	The Conference, noting that 18 States parties to the Treaty have yet to bring into force comprehensive safeguards agreements, urges them to do so as soon as possible and without further delay.	Australia encourages all States that have not yet done so to bring into force a comprehensive safeguards agreement with IAEA, together with an additional protocol. Australia has facilitated discussions, provided expert advice and hosted study tours that assist States to bring into force those agreements. Australia, along with the other members of the Vienna Group of 10, submitted a working paper to the 2015 Review Conference which included the issues of compliance and verification.
Action 26	The Conference underscores the importance in complying with the non-proliferation obligations, addressing all compliance matters in order to uphold the Treaty's integrity and the authority of the safeguards system.	Australia holds itself to the highest standards of compliance with its non-proliferation commitments and obligations, and cooperates fully with IAEA. Australia consistently and strongly promotes universal compliance by States with their non-proliferation obligations, under the Treaty and under their agreements with IAEA.

		Australia, through the Vienna Group of 10, has presented working papers which cover, inter alia, compliance and verification issues to the 2013 and 2014 Preparatory Committees and the 2015 Review Conference. See also responses to action 29.
Action 27	The Conference underscores the importance of resolving all cases of non-compliance with safeguards obligations in full conformity with the IAEA statute and the respective legal obligations of Member States. In this regard, the Conference calls upon Member States to extend their cooperation to the Agency.	Australia holds itself to the highest standards of compliance with its non-proliferation commitments and obligations, and cooperates fully with IAEA. Australia consistently calls on all States to cooperate fully with IAEA and to comply with their international safeguards obligations. Australia provided an extra-budgetary contribution for IAEA to carry out verification activities in support of the P5+1/Islamic Republic of Iran Joint Plan of Action.
Action 28	The Conference encourages all States parties which have not yet done so to conclude and to bring into force additional protocols as soon as possible and to implement them provisionally pending their entry into force.	Australia signed the additional protocol on 23 September 1997, with entry into force on 12 December 1997. Australia actively encourages all States that have not yet done so to bring into force an additional protocol to their safeguards agreements with IAEA. See also response to action 23.
Action 29	The Conference encourages IAEA to further facilitate and assist the States parties in the conclusion and entry into force of comprehensive safeguards agreements and additional protocols. The Conference calls on States parties to consider specific measures that would promote the universalization of the comprehensive safeguards agreements.	Australia currently chairs the Asia-Pacific Safeguards Network, an informal network of safeguards authorities, ministries and other organizations responsible for implementing safeguards in the countries of the Asia-Pacific region. The objective of the network is to promote best practice safeguards in the region. The Director General of the Australian Safeguards and Non-Proliferation Office chairs the IAEA Director General's Standing Advisory Group on Safeguards Implementation. Australia has also provided instructors for safeguards courses run by IAEA and other partners in the Asia-Pacific region. Australia continues to engage with and support South-East Asian and Pacific Islands States on safeguards issues, particularly those States which have yet to conclude and bring into force comprehensive safeguards agreements, additional protocols and small quantities protocols with IAEA.

		Australia has offered assistance to some States in the development of their safeguards agreements and arrangements with IAEA.
Action 30	The Conference calls for the wider application of safeguards to peaceful nuclear facilities in the nuclear-weapon States, under the relevant voluntary offer safeguards agreements, in the most economic and practical way possible, taking into account the availability of IAEA resources, and stresses that comprehensive safeguards and additional protocols should be universally applied once the complete elimination of nuclear weapons has been achieved.	The Non-Proliferation and Disarmament Initiative presented a working paper on "wider application of safeguards in the nuclear-weapons States" to the 2013 Preparatory Committee.
Action 31	The Conference encourages all States parties with small quantities protocols which have not yet done so to amend or rescind them, as appropriate, as soon as possible.	Australia has never had a small quantities protocol. Australia consistently encourages all Non-Proliferation Treaty States parties with older small quantities protocols that have not yet done so to amend or rescind them, as appropriate, as soon as possible. Australia, including as part of the Non-Proliferation and Disarmament Initiative, conducts outreach to States, where appropriate, to amend or rescind small quantities protocols.
Action 32	The Conference recommends that IAEA safeguards should be assessed and evaluated regularly. Decisions adopted by the IAEA policy bodies aimed at further strengthening the effectiveness and improving the efficiency of IAEA safeguards should be supported and implemented.	As a Board of Governors member, Australia supports the Director General's and Board's efforts to continually strengthen the effectiveness and efficiency of IAEA safeguards, including through the use of the State-level concept. See also response to action 29.
Action 33	The Conference calls upon all States parties to ensure that IAEA continues to have all political, technical and financial support so that it is able to effectively meet its responsibility to apply safeguards as required by article III of the Treaty.	Australia always pays its assessed contribution and provides additional extrabudgetary contributions and in-kind support. Australia is a strong proponent of IAEA carrying out its functions with the full cooperation of all States. One of the key elements of Australian support to IAEA is its active participation on the IAEA Board of Governors and participation in the IAEA Member State Support Programme since 1980.

Action 34	The Conference encourages States parties, within the framework of the IAEA statute, to further develop a robust, flexible, adaptive and cost-effective international technology base for advanced safeguards through cooperation among Member States and with IAEA.	Australia maintains a strong technology base and technical capabilities, which it makes available to contribute to international safeguards efforts. It also maintains an IAEA Member State Support Programme to support IAEA technical safeguards capabilities. Australia maintains two diagnostic laboratories as part of the IAEA network of analytical laboratories.
Action 35	The Conference urges all States parties to ensure that their nuclear-related exports do not directly or indirectly assist the development of nuclear weapons or other nuclear explosive devices and that such exports are in full conformity with the objectives and purposes of the Treaty as stipulated, particularly, in articles I, II and III of the Treaty, as well as the decision on principles and objectives of nuclear non-proliferation and disarmament adopted in 1995 by the Review and Extension Conference.	Australian uranium is exported for exclusively peaceful purposes and only to countries and parties with which Australia has a bilateral nuclear cooperation agreement. The country's bilateral nuclear cooperation agreements include treaty-level assurances that Australian nuclear material will be used for peaceful purposes only, and that that material will be subject to IAEA safeguards. Those agreements ensure that Australian nuclear exports remain in exclusively peaceful use and may only be retransferred to a party with a bilateral nuclear cooperation agreement with Australia. Australia currently has 23 such bilateral agreements in force, covering 41 countries plus Taiwan. In the case of non-nuclear-weapon States parties, IAEA safeguards must apply to all existing and future nuclear activities. Australia has ratified the 2005 amendment to the Convention on the Physical Protection of Nuclear Material, which is implemented via the Nuclear Non-Proliferation Safeguards Act 1987 and the Non-Proliferation Legislation Amendment Act 2007, and is implementing revision 5 of IAEA INFCIRC/225 (Physical Protection of Nuclear Material and Nuclear Facilities).
Action 36	The Conference encourages States parties to make use of multilaterally negotiated and agreed guidelines and understandings in developing their own national export controls.	Australia ensures that nuclear-related exports do not assist the development of nuclear weapons or other nuclear explosive devices. Australian export controls are based on multilateral best practice. In addition, Australian nuclear agencies cooperate closely with law enforcement and customs agencies to enhance the country's capability to detect, deter and disrupt illicit trafficking in nuclear materials.

Australia is a member of both the Nuclear Suppliers Group and the Zangger Committee. The Customs (Prohibited Exports) Regulations of the Customs Act 1901 states that any item on the country's control list, the Defence and Strategic Goods List, requires authorization prior to export. The List incorporates the Nuclear Suppliers Group control list (parts I and II), the Zangger Committee trigger list and annexes 1 and 2 of the IAEA additional protocol.

The Australian Government has also enacted the Weapons of Mass Destruction (Prevention of Proliferation) Act 1995. The Act and the associated Regulations enable the Government to control the export or transfer of any goods and services that may assist a weapons of mass destruction programme and which are not controlled under other legislation.

See also response to action 35.

Australia contributed to two working papers on export controls submitted to the 2013 Preparatory Committee by the Non-Proliferation and Disarmament Initiative and the Vienna Group of 10, respectively. The Vienna Group of 10 also presented working papers on "Vienna issues" to the 2014 Preparatory Committee and the 2015 Review Conference, which cover, inter alia, export control issues.

Action 37	The Conference encourages States parties to consider whether a recipient State has brought into force IAEA safeguards obligations in making nuclear export decisions.	See response to action 35.
Action 38	The Conference calls upon all States parties, in acting in pursuance of the objectives of the Treaty, to observe the legitimate right of all States parties, in particular developing States, to full access to nuclear material, equipment and technological information for peaceful purposes.	Australia has consistently affirmed its support for the development of nuclear energy and technology for peaceful purposes, within a framework that reduces proliferation risk and adheres to the highest international standards for safeguards, security and safety. The Vienna Group of 10 and the Non-Proliferation and Disarmament Initiative submitted working papers to the 2015 Review Conference which covered, inter alia, peaceful uses of nuclear energy.

Action 39	States parties are encouraged to facilitate transfers of nuclear technology and materials and international cooperation among States parties, in conformity with articles I, II, III and IV of the Treaty, and to eliminate in this regard any undue constraints inconsistent with the Treaty.	Australia facilitates the transfers of nuclear technology and international cooperation among States parties through arrangements such as the Regional Cooperative Agreement for Research, Development and Training in Nuclear Science and Technology for the Asia and Pacific Region; the Forum for Nuclear Cooperation in Asia; the IAEA Technical Cooperation Programme; the IAEA Peaceful Uses Initiative; other IAEA programmes; and through bilateral arrangements. See responses to actions 35, 36 and 38.
Action 40	The Conference encourages all States to maintain the highest possible standards of security and physical protection of nuclear materials and facilities.	Australia maintains the highest possible standards of security and physical protection of nuclear materials and facilities, as was recognized by the country's number 1 ranking for security of its nuclear materials by the 2012 and 2014 Nuclear Threat Initiative nuclear materials security indexes. Australia is an active participant in the series of Nuclear Security Summits focused on implementing measures to improve the global nuclear security regimes, particularly against international terrorism. The country's Foreign Minister, Julie Bishop, attended the most recent Nuclear Security Summit held in the Netherlands in March 2014, where Australia announced a contribution of 1 million Australian dollars to the IAEA Nuclear Security Fund to support IAEA activities in the Indo-Pacific region. In November 2013, Australia hosted an IAEA International Physical Protection Advisory Service mission. Australia has also provided experts to a number of other Advisory Service missions. The Australian Nuclear Science and Technology Organization participates in the IAEA Advisory Group on Nuclear Security, advising the IAEA Director General on activities related to preventing, detecting and responding to nuclear and radiological terrorism. Australia has hosted a number of table-top exercises in support of the Global Initiative to Combat Nuclear

		Terrorism. Australia also chairs the Global Initiative's Nuclear Forensics Working Group. Australia, through the Vienna Group of 10, presented a working paper on nuclear security to the 2013 Preparatory Committee and working papers on "Vienna issues" to the 2014 Preparatory Committee and the 2015 Review Conference, which covered, inter alia, nuclear security. The Non-Proliferation and Disarmament Initiative has presented a working paper on nuclear security to the 2014 Preparatory Committee. The Initiative working paper to the 2015 Review Conference also covered, inter alia, nuclear security. See also response to action 35.
Action 41	The Conference encourages all States parties to apply, as appropriate, IAEA recommendations on the physical protection of nuclear material and nuclear facilities (INFCIRC/225/Rev.4 (Corrected)) and other relevant international instruments at the earliest possible date.	At The Hague Nuclear Security Summit, Australia committed to realize or exceed the objectives of INFCIRC/225/Rev.5 as part of the joint statements on strengthening nuclear security implementation. See also response to action 35.
Action 42	The Conference calls on all States parties to the Convention on the Physical Protection of Nuclear Material to ratify the amendment to the Convention as soon as possible and encourages them to act in accordance with the objectives and the purpose of the amendment until such time as it enters into force. The Conference also encourages all States that have not yet done so to adhere to the Convention and adopt the amendment as soon as possible.	Australia ratified the amendment on 17 July 2008. See also response to action 35.
Action 43	The Conference urges all States parties to implement the principles of the revised IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as the Guidance on the Import and Export of Radioactive Sources approved by the IAEA Board of Governors in 2004.	Australia has implemented the principles of the revised IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as the Guidance on the Import and Export of Radioactive Sources approved by the IAEA Board of Governors in 2004. Australia is implementing the principles of the revised Guidance on the Import and Export of Radioactive Sources approved by the IAEA Board of Governors in 2011.

Action 44	The Conference calls upon all States parties to improve their national capabilities to detect, deter and disrupt illicit trafficking in nuclear materials throughout their territories, in accordance with their relevant international legal obligations, and calls upon those States parties in a position to do so to work to enhance international partnerships and capacity-building in this regard. The Conference also calls upon States parties to establish and enforce effective domestic controls to prevent the proliferation of nuclear weapons in accordance with their relevant international legal obligations.	See response to action 36. Australia supports and contributes as necessary to the Incident and Trafficking Database. The Australian Nuclear Science and Technology Organization has a research programme seeking to improve capabilities to detect illicit trafficking in nuclear materials, and has engaged in exchanges with regional partners in that regard.
Action 45	The Conference encourages all States parties that have not yet done so to become party to the International Convention for the Suppression of Acts of Nuclear Terrorism as soon as possible.	Australia deposited its instrument of ratification of the International Convention for the Suppression of Acts of Nuclear Terrorism on 16 March 2012. (National legislation: Nuclear Terrorism Legislation Amendment Act 2012.) Australia has implemented its requirements under Security Council resolution 1540 (2004) and plays an active role in the Security Council Committee established pursuant to resolution 1540 (2004). Also, Australia has taken every opportunity in its outreach on non-proliferation to inform Asia-Pacific countries of the goals and obligations of resolution 1540 (2004) and to offer to work with them to further improve and strengthen their capacity to implement the resolution where possible.
Action 46	The Conference encourages IAEA to continue to assist the States parties in strengthening their national regulatory controls of nuclear material, including the establishment and maintenance of the State systems of accounting for and control of nuclear material, as well as systems on regional level. The Conference calls upon IAEA member States to broaden their support for the relevant IAEA programmes.	Australia, as an IAEA Board of Governors member, affirms its support for this recommendation. Australia further broadens its support for IAEA programmes through participation in the IAEA Member State Support Programme. Australia, through mechanisms such as the Regional Cooperative Agreement for Research, Development and Training in Nuclear Science and Technology for the Asia and Pacific Region; the Regional Security of Radioactive Sources Project; and the Asia-Pacific Safeguards Network; and has assisted regional countries in strengthening their national regulatory controls of nuclear and other radioactive materials.

III. Peaceful uses of nuclear energy: *The Conference calls upon States parties to act in conformity with all the provisions of the Treaty and to:*

Action 47	Respect each country's choices and decisions in the field of peaceful uses of nuclear energy without jeopardizing its policies or international cooperation agreements and arrangements for peaceful uses of nuclear energy and its fuel cycle policies.	Australia respects each country's choices and decisions in the field of peaceful uses of nuclear energy and engages in extensive cooperation with other States parties and international organizations in the further development of nuclear energy for peaceful uses. See also responses to actions 35 and 38.
Action 48	Undertake to facilitate, and reaffirm the right of States parties to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy.	See response to action 38. Australia has shared its experience with neighbouring countries in the safe application of nuclear science and technology through arrangements such as the Regional Cooperative Agreement for Research, Development and Training in Nuclear Science and Technology for the Asia and Pacific Region; the Forum for Nuclear Cooperation in Asia; the Regional Security of Radioactive Sources Project; the IAEA Technical Cooperation Programme; the IAEA Peaceful Uses Initiative; other IAEA programmes; and bilaterally.
Action 49	Cooperate with other States parties or international organizations in the further development of nuclear energy for peaceful purposes, with due consideration for the needs of the developing areas of the world.	The Australian Nuclear Science and Technology Organization participates in the IAEA Standing Advisory Group on Nuclear Applications, providing high-level input on priorities for IAEA research programmes in nuclear technology. The Australian Nuclear Science and Technology Organization participates in the Sahel Project, educating IAEA fellows from the Sahel region in isotopic techniques for groundwater research and management. The Organization was designated an IAEA Neutron Scattering Collaborating Centre from 2009 to 2012. The Centre provided access for scientists and researchers from the region to facilities and expertise at the Organization. As a Neutron Scattering Collaborating Centre, the Organization hosted international neutron scattering schools. See responses to actions 48 and 52.

Action 50	Give preferential treatment to the non-nuclear-weapon States parties to the Treaty, taking the needs of developing countries, in particular, into account.	See response to action 48.
Action 51	Facilitate transfers of nuclear technology and international cooperation among States parties in conformity with articles I, II, III, and IV of the Treaty, and eliminate in this regard any undue constraints inconsistent with the Treaty.	See responses to actions 35, 36 and 38.
Action 52	Continue efforts, within IAEA, to enhance the effectiveness and efficiency of its Technical Cooperation Programme.	Australia is a long-standing contributor to the IAEA Technical Cooperation Fund. In 2011, Australia provided 100,000 Australian dollars in an extrabudgetary Peaceful Uses Initiative contribution to IAEA for a study on marine impacts of radiation from the Fukushima power plant and, in 2012, contributed 15,000 Australian dollars to the IAEA Peaceful Uses Initiative to study ocean acidification. In 2014, Australia also contributed 20,000 euros to the IAEA Programme of Action for Cancer Therapy. In 2015, Australia is making a 20,000 United States dollars in-kind contribution to the Sahel Project, hosting two fellows from the Sahel region. Australia is contributing $A45,000 towards training for Pacific IAEA member States to help develop their Technical Cooperation Projects. The policy of Australia has been to pay its annual Technical Cooperation Fund contribution in full and on time, and to encourage other States to do the same. In addition to the Technical Cooperation Fund, Australia plays a key role in cooperation on the peaceful uses of nuclear energy in the Asia-Pacific region. The country's nuclear-related agencies, the Australian Nuclear Science and Technology Organization, the Australian Radiation Protection and Nuclear Safety Agency and the Australian Safeguards and Non-Proliferation Office continue to provide experts to IAEA and to hold a range of meetings with regional counterparts, as part of bilateral cooperation agreements and IAEA projects.

		Australia, through the Vienna Group of 10, presented working papers on cooperation in the peaceful uses of nuclear energy to the 2013 Preparatory Committee and on "Vienna issues" to the 2014 Preparatory Committee and 2015 Review Conference, which covers, inter alia, cooperation on peaceful uses.
Action 53	Strengthen the IAEA Technical Cooperation Programme in assisting developing States parties in the peaceful uses of nuclear energy.	See response to action 52.
Action 54	Make every effort and to take practical steps to ensure that IAEA resources for technical cooperation activities are sufficient, assured and predictable.	See response to action 52.
Action 55	Encourage all States in a position to do so to make additional contributions to the initiative designed to raise 100 million United States dollars over the next five years as extrabudgetary contributions to IAEA activities, while welcoming the contributions already pledged by countries and groups of countries in support of IAEA activities.	In 2011, Australia contributed 100,000 Australian dollars to IAEA for a study on marine impacts of radiation from the Fukushima power plant. The study is administered by IAEA and conducted under the Regional Cooperation Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific Region, a treaty-level agreement to which Australia is a party. In 2012, Australia contributed 15,000 Australian dollars to the IAEA Peaceful Uses Initiative to study ocean acidification. In 2014, Australia also contributed 20,000 euros to the IAEA Programme of Action for Cancer Therapy. Australia is contributing $A45,000 towards training for Pacific IAEA member States to help develop their technical cooperation projects.
Action 56	Encourage national, bilateral and international efforts to train the necessary skilled workforce needed to develop peaceful uses of nuclear energy.	See response to action 48. Australia, in cooperation with IAEA, provided training for international participants on a range of topics related to the peaceful uses of nuclear energy, including specialized areas such as radiological crime scene evaluation, reactor decommissioning, groundwater management, neutron scattering research and the regulation of uranium mining.

Action 57	Ensure that, when developing nuclear energy, including nuclear power, the use of nuclear energy must be accompanied by commitments to and ongoing implementation of safeguards as well as appropriate and effective levels of safety and security, consistent with States' national legislation and respective international obligations.	See responses to action 38 and action 40.
Action 58	Continue to discuss further, in a non-discriminatory and transparent manner under the auspices of IAEA or regional forums, the development of multilateral approaches to the nuclear fuel cycle, including the possibilities of creating mechanisms for assurance of nuclear fuel supply, as well as possible schemes dealing with the back-end of the fuel cycle without affecting rights under the Treaty and without prejudice to national fuel cycle policies, while tackling the technical, legal and economic complexities surrounding these issues, including, in this regard, the requirement of IAEA full scope safeguards.	Australia recognizes the potential for proposals relating to multilateral fuel assurance mechanisms and multilateralization of the fuel cycle to reduce the risk of nuclear proliferation. Through its position on the IAEA Board of Governors, Australia has supported IAEA managed multilateral fuel cycle projects and proposals. Australia supports further discussion of this issue in appropriate international forums.
Action 59	Consider becoming party, if they have not yet done so, to the Convention on Nuclear Safety, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the International Convention for the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Material, and to ratify its amendment so that it may enter into force at an early date.	Australia is a party to the Convention on Nuclear Safety, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the International Convention for the Suppression of Acts of Nuclear Terrorism and the Convention on the Physical Protection of Nuclear Material (and has ratified its amendment). See also response to action 45.
Action 60	Promote the sharing of best practices in the area of nuclear safety and security, including through dialogue with the nuclear industry and the private sector, as appropriate.	See response to action 48. Australia supports and promotes the actions in the IAEA Action Plan on Nuclear Safety, which takes forward lessons learned from the Fukushima nuclear accident.

		The Australian Radiation Protection and Nuclear Safety Agency participates in the development of IAEA safety standards, including senior representation on the Agency's Commission on Safety Standards through the Chief Executive Officer of the Agency. With the Australian Safeguards and Non-Proliferation Office, the Agency has supported the establishment of the IAEA Nuclear Security Series by contributing to the development of the publications and attending meetings of the Nuclear Security Guidance Committee. As the chair of the United Nations Scientific Committee on the Effects of Atomic Radiation, the Chief Executive Officer of the Agency led the preparation of the Committee's assessment of the health and environmental effects of the nuclear accident at Fukushima. In the margins of the IAEA General Conference, Australia hosts a Friends of Responsible Uranium Mining activity with industry involvement that provides a forum to share best practices in uranium mining. The Australian Nuclear Science and Technology Organization played a leading role in the 2014 Nuclear Industry Summit, which brought together leaders of the nuclear industry to strengthen efforts in areas including cybersecurity and reducing the use of highly enriched uranium in the civilian sector. Australia, through the Vienna Group of 10, presented working papers on nuclear safety to the 2012 and 2013 Preparatory Committees and a working paper on "Vienna issues" to the 2014 Preparatory Committee, which covers, inter alia, nuclear safety issues.
Action 61	Encourage States concerned, on a voluntary basis, to further minimize highly enriched uranium in civilian stocks and use, where technically and economically feasible.	Australia has minimized its possession and use of highly enriched uranium through the exclusive use of low-enriched uranium for its nuclear research reactor fuel and for targets used in the manufacture of medical radioisotopes. The country's success in that regard has demonstrated that there is no technical reason for the use of highly enriched uranium in radioisotope production.

		Australia has also reduced its remaining stocks of highly enriched uranium. Australia is sharing its experiences in the use of low-enriched uranium in research reactors and radioisotope production, both bilaterally and by participating in IAEA and Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency initiatives. In June 2014, Australia signed a Ministerial Joint Declaration to support the OECD initiatives. Australia, through the Vienna Group of 10, presented a working paper on "Vienna issues" to the 2015 Review Conference, which covers, inter alia, the issue of the minimization of highly enriched uranium.
Action 62	Transport radioactive materials consistent with relevant international standards of safety, security and environmental protection, and to continue communication between shipping and coastal States for the purpose of confidence-building and addressing concerns regarding transport safety, security and emergency preparedness.	Australia works to meet the highest standards of safety, security and environmental protection in the transport of radioactive materials through its stringent regulation of nuclear activities, including uranium mining, which takes into consideration all IAEA requirements and recommendations. Australia also participates in the IAEA Shipping and Coastal States Transport Dialogue.
Action 63	Put in force a civil nuclear liability regime by becoming party to relevant international instruments or adopting suitable national legislation, based upon the principles established by the main pertinent international instruments.	Australia supports the principles enshrined in the nuclear liability conventions adopted in 1997 and 2004: the 1997 Vienna Convention; the Convention on Supplementary Compensation for Nuclear Damage; and the 2004 Protocol to the Paris Convention. Australia has signed the Convention on Supplementary Compensation for Nuclear Damage. At the invitation of the Director General of IAEA, Australia chairs the IAEA International Expert Group on Nuclear Liability.
Action 64	The Conference calls upon all States to abide by the decision adopted by consensus at the IAEA General Conference on 18 September 2009 on prohibition of armed attack or threat of attack against nuclear installations, during operation or under construction.	Australia abides by the decision.

IV. The Middle East, particularly implementation of the 1995 Resolution on the Middle East

1. The Conference reaffirms the importance of the resolution on the Middle East adopted by the 1995 Review and Extension Conference and recalls the affirmation of its goals and objectives by the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. The Conference stresses that the resolution remains valid until the goals and objectives are achieved. The resolution, which was co-sponsored by the depositary States of the Treaty on the Non-Proliferation of Nuclear Weapons (the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America), is an essential element of the outcome of the 1995 Conference and of the basis on which the Treaty was indefinitely extended without a vote in 1995. States parties renew their resolve to undertake, individually and collectively, all necessary measures aimed at its prompt implementation.

2. The Conference reaffirms its endorsement of the aims and objectives of the Middle East peace process, and recognizes that efforts in this regard, as well as other efforts, contribute to, inter alia, a Middle East zone free of nuclear weapons as well as other weapons of mass destruction.

3. The Conference takes note of the reaffirmation at the 2010 Review Conference by the five nuclear-weapon States of their commitment to a full implementation of the 1995 Resolution on the Middle East.

4. The Conference regrets that little progress has been achieved towards the implementation of the 1995 Resolution on the Middle East.

5. The Conference recalls the reaffirmation by the 2000 Review Conference of the importance of Israel's accession to the Treaty and the placement of all its nuclear facilities under comprehensive IAEA safeguards. The Conference reaffirms the urgency and importance of achieving universality of the Treaty. The Conference calls on all States in the Middle East that have not yet done so to accede to the Treaty as non-nuclear-weapon States so as to achieve its universality at an early date.

Australia continues to support the establishment of a Middle East zone free of nuclear weapons and other weapons of mass destruction, freely arrived at by regional States. The Australian Government welcomed the outcome of the 2010 Review Conference on the 1995 Middle East resolution, and will support constructive efforts to progress the implementation of a Middle East zone free of weapons of mass destruction and their means of delivery.

Australia affirms its readiness to support efforts towards convening a Conference on the establishment of such a zone and calls on all relevant States to achieve a constructive outcome to those processes.

Universal membership of and adherence to existing treaties and instruments would greatly facilitate the establishment of a Middle East zone free of weapons of mass destruction and their means of delivery. Australia is contributing to that objective through its efforts to achieve universal membership of the Non-Proliferation Treaty, the Comprehensive Nuclear-Test-Ban Treaty, the Biological Weapons Convention and the Chemical Weapons Convention and its active support for the International Code of Conduct against Ballistic Missile Proliferation.

The additional protocol on strengthened IAEA safeguards offers Middle East States an important confidence-building opportunity. Australia encourages the adoption by all States of an additional protocol with IAEA, without delay or preconditions. Stronger safeguards are in the interests of all countries when they can prevent the emergence of more nuclear-weapons-capable States.

Australia acknowledges the difficulty of achieving disarmament and non-proliferation goals without concurrent efforts to address the underlying political tensions that drive international conflicts. It urges all States parties to work to secure a regional political environment that is conducive to disarmament, non-proliferation and the creation of a Middle East zone free of weapons of mass destruction and their means of delivery.

6. The Conference stresses the necessity of strict adherence by all States parties to their obligations and commitments under the Treaty. The Conference urges all States in the region to take relevant steps and confidence-building measures to contribute to the realization of the objectives of the 1995 Resolution on the Middle East and calls upon all States to refrain from undertaking any measures that preclude the achievement of this objective.

7. The Conference emphasizes the importance of a process leading to full implementation of the 1995 Resolution on the Middle East. To that end, the Conference endorses the following practical steps:

(a) The Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, will convene a conference in 2012, to be attended by all States of the Middle East, on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction, on the basis of arrangements freely arrived at by the States of the region, and with the full support and engagement of the nuclear-weapon States. The 2012 Conference shall take as its terms of reference the 1995 Resolution;

(b) Appointment by the Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, of a facilitator, with a mandate to support implementation of the 1995 Resolution by conducting consultations with the States of the region in that regard and undertaking preparations for the convening of the 2012 Conference. The facilitator will also assist in implementation of follow-on steps agreed by the participating regional States at the 2012 Conference. The facilitator will report to the 2015 Review Conference and its Preparatory Committee meetings;

(c) Designation by the Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, of a host Government for the 2012 Conference;

The Non-Proliferation and Disarmament Initiative has presented a working paper on the issue to the 2014 Preparatory Committee. The Initiative working paper submitted to the 2015 Review Conference also included the issue.

(d) Additional steps aimed at supporting the implementation of the 1995 Resolution, including that IAEA, the Organization for the Prohibition of Chemical Weapons and other relevant international organizations be requested to prepare background documentation for the 2012 Conference regarding modalities for a zone free of nuclear weapons and other weapons of mass destruction and their delivery systems, taking into account work previously undertaken and experience gained;

(e) Consideration of all offers aimed at supporting the implementation of the 1995 Resolution, including the offer of the European Union to host a follow-on seminar to that organized in June 2008.

8. The Conference emphasizes the requirement of maintaining parallel progress, in substance and timing, in the process leading to achieving total and complete elimination of all weapons of mass destruction in the region, nuclear, chemical and biological.

9. The Conference reaffirms that all States parties to the Treaty, particularly the nuclear-weapon States and the States in the region, should continue to report on steps taken to implement the 1995 Resolution, through the United Nations Secretariat, to the President of the 2015 Review Conference, as well as to the Chairperson of the Preparatory Committee meetings to be held in advance of that Conference.

10. The Conference further recognizes the important role played by civil society in contributing to the implementation of the 1995 Resolution and encourages all efforts in this regard.

Other regional issue

The Conference strongly urges the Democratic People's Republic of Korea to fulfil the commitments under the Six-Party Talks, including the complete and verifiable abandonment of all nuclear weapons and existing nuclear programmes in accordance with the September 2005 joint statement, and urges the Democratic People's Republic of Korea to return, at an early date, to the Treaty and to its adherence with its IAEA safeguards agreement. The Conference also calls on the Democratic People's Republic of Korea and all States parties to fully implement all relevant nuclear non-proliferation and disarmament obligations. The Conference reaffirms its firm support for the Six-Party Talks and remains determined to achieve the satisfactory and comprehensive resolution to the issues involved through diplomatic means.	Australia strongly urges the Democratic People's Republic of Korea to fulfil the commitments under the Six-Party Talks, including the complete and verifiable abandonment of all nuclear weapons and existing nuclear programmes in accordance with the September 2005 joint statement, and urges the Democratic People's Republic of Korea to return, at the earliest date, to the Treaty and to its adherence to its IAEA safeguards agreement. Australia fully implements all relevant nuclear non-proliferation and disarmament obligations, including relevant Security Council resolutions. The Non-Proliferation and Disarmament Initiative working paper submitted to the 2015 Review Conference also included the issue.

NPT/CONF.2015/13

2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Distr.: General
13 March 2015

Original: English

New York, 27 April-22 May 2015

Activities of the International Atomic Energy Agency relevant to article III of the Treaty on the Non-Proliferation of Nuclear Weapons

Background paper prepared by the Secretariat of the International Atomic Energy Agency

Executive Summary

- According to its Statute, the objectives of the International Atomic Energy Agency (IAEA) are to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world" and to "ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose".
- The 2010 Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons reaffirmed that IAEA is the competent authority responsible for verifying and assuring States parties' compliance with their safeguards agreements. IAEA has continued to function as such, implementing safeguards and drawing safeguards conclusions.
- In order for IAEA to continue to fulfil its mandate under article III of the Non-Proliferation Treaty, the IAEA safeguards have been strengthened since 2010 and their implementation has continued to evolve. Additional States have concluded comprehensive safeguards agreements, brought into force additional protocols and modified or rescinded small quantities protocols to their comprehensive safeguards agreements. The implementation of IAEA safeguards has evolved through, for example, the further development of safeguards concepts and approaches, strengthened information analysis and State evaluation, and the use of advanced technology and techniques. The capabilities of IAEA to analyse nuclear material and environmental samples have been enhanced and information technology is being modernized. New tools and equipment have been deployed. Processes and procedures have been improved and new initiatives have been taken to improve quality management and measure performance. IAEA has also been preparing for future challenges.

15-03967 (E) 250315

Please recycle

- The steps taken have strengthened the effectiveness and improved the efficiency of IAEA safeguards, at a time when the Agency's workload has grown steadily while resources have not increased commensurately. Over the past years, the general trend has been of increasing safeguards responsibilities: in the last five years, the number of nuclear facilities under safeguards has risen by 12 per cent and the quantity of nuclear material under safeguards has increased by 14 per cent. Today, IAEA implements safeguards in some 1,300 facilities and applies safeguards to nuclear material equivalent to approximately 190,000 significant quantities. In addition, IAEA is continuing its effort to resolve outstanding safeguards implementation issues in three States and has taken on additional monitoring and verification activities in one of these States.

- Given the interest in nuclear energy and other challenges, IAEA, now and in the future, is likely to have to deliver soundly based safeguards conclusions in a resource-constrained environment. Therefore, it will continue to seek ways to improve its productivity by optimizing processes and making better use of modern technology. And given that safeguards implementation is a cooperative effort, it will seek to further enhance cooperation with State and regional authorities in the implementation of safeguards. Continued success requires States' political, technical and financial support.

Introduction

1. IAEA and its safeguards were established nearly 60 years ago to help ensure that nuclear energy would serve peace and development. The purpose of IAEA safeguards is to provide credible assurances to the international community that nuclear material and other specified items placed under IAEA safeguards are not diverted from peaceful uses to nuclear weapons or other nuclear explosive devices.

2. IAEA safeguards are grounded in the provisions of the IAEA Statute. Article III.A.5 of the Statute authorizes IAEA to establish and administer safeguards designed to ensure that nuclear material, services, equipment, facilities and information made available by IAEA or at its request or under its supervision or control are not used in such a way as to further any military purpose. Article III.A.5 also authorizes IAEA to apply safeguards to any bilateral or multilateral arrangement, at the request of the parties, and to any of the nuclear activities of a State, at that State's request. Pursuant to this authority, IAEA concludes agreements with States, and with regional inspectorates, for the application of safeguards. These agreements are of three types: (a) comprehensive safeguards agreements with non-nuclear-weapon States party to the Non-Proliferation Treaty; (b) voluntary offer safeguards agreements with the nuclear-weapon States party to the Treaty; and (c) item-specific safeguards agreements with non-Treaty States.[1]

3. Article III of the Non-Proliferation Treaty requires all non-nuclear-weapon States party to the Treaty to accept safeguards, as set forth in an agreement to be

[1] The IAEA implements item-specific safeguards agreements, which are based on INFCIRC/66/Rev.2, in States that are not party to the Non-Proliferation Treaty. Under these agreements, the IAEA applies safeguards to ensure that nuclear material, non-nuclear material, facilities and other items subject to such safeguards agreements are not used for the manufacture of any nuclear weapon or to further any military purpose, and that such items are used exclusively for peaceful purposes and not for the manufacture of any nuclear explosive device.

negotiated and concluded with IAEA in accordance with the IAEA Statute and the IAEA safeguards system. Comprehensive safeguards agreements, which follow the structure and content set out in IAEA document INFCIRC/153 (Corrected),[2] are also required under other bilateral or multilateral arrangements.[3]

4. Under its comprehensive safeguards agreement, each State undertakes to accept IAEA safeguards on all source or special fissionable material in all peaceful nuclear activities within the territory of the State, under its jurisdiction, or carried out under its control anywhere. For its part, IAEA has a corresponding right and obligation to ensure that safeguards are applied on all such material for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices. IAEA verifies that State declarations of nuclear material subject to safeguards are not only "correct" (i.e., that they accurately describe the type(s) and quantity(ies) of a State's declared nuclear material holdings), but also are "complete" (i.e., that they include everything that is required to be declared).

5. Each of the five nuclear-weapon States has concluded a voluntary offer safeguards agreement with IAEA. Under such an agreement, IAEA applies safeguards to nuclear material in those facilities or parts thereof which have been selected by IAEA from the State's list of eligible facilities in order to verify that such material is not withdrawn from safeguards except as provided for in the agreement.[4]

6. A State with a safeguards agreement(s) may also conclude a protocol additional to its safeguards agreement. In 1997, the IAEA Board of Governors approved the Model Additional Protocol to "strengthen the effectiveness and improve the efficiency of the safeguards system as a contribution to global nuclear non-proliferation objectives".[5] The additional information and broader access for IAEA inspectors provided for in the additional protocol are designed to "fill the gaps" in information and access required under comprehensive safeguards agreements. The additional protocol is essential for IAEA to obtain a more complete picture of the existing and planned nuclear programmes and material holdings of States with comprehensive safeguards agreements. Thus, the entry into force and implementation of an additional protocol in a State with a comprehensive safeguards agreement is of vital importance for IAEA to be able to provide assurances about the

---

[2] The Structure and Content of Agreements between the Agency and States required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons.

[3] These arrangements include: the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco); the South Pacific Nuclear Free Zone Treaty (Rarotonga Treaty); the Argentine-Brazilian Declaration on Common Nuclear Policy (28 November 1990); the Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Treaty of Bangkok); the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba); and the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Treaty of Semipalatinsk).

[4] In selecting facilities under voluntary offer safeguards agreements for the application of safeguards, the IAEA takes into consideration factors such as: (a) whether the selection of a facility would satisfy legal obligations arising from other agreements concluded by the State; (b) whether useful experience may be gained in implementing new safeguards approaches or in using advanced equipment and technology; and (c) whether the cost efficiency of IAEA safeguards may be enhanced by applying safeguards, in the exporting State, to nuclear material being shipped to States with comprehensive safeguards agreements in force.

[5] Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards (INFCIRC/540 (Corrected)).

exclusively peaceful nature of that State's nuclear programme. The measures provided for under additional protocols significantly increase the ability of IAEA to verify the peaceful use of all nuclear material in States with comprehensive safeguards agreements.

7. As a means of minimizing the burden of safeguards implementation for those States with minimal or no nuclear activities, a small quantities protocol was introduced by IAEA in the early 1970s. Its practical effect was to hold in abeyance the implementation of most of the provisions in Part II[6] of a State's comprehensive safeguards agreement as long as certain eligibility criteria were met. In 2005, the Board of Governors approved a revision to the standard text of the small quantities protocol, reducing the provisions held in abeyance, and modified the eligibility criteria for such a protocol, making it unavailable to a State with an existing or planned facility. Under a small quantities protocol based on the revised text, the State is required to submit to IAEA an initial report on all nuclear material and inform IAEA as soon as a decision to construct or authorize the construction of a nuclear facility has been taken, and IAEA may carry out inspections in the State. The Board called on all States with small quantities protocols to amend or rescind their protocols, as appropriate, as soon as possible.

8. Every year, IAEA draws a safeguards conclusion for each State with a safeguards agreement in force. In order to draw an independent and soundly based safeguards conclusion, IAEA needs to have conducted a sufficient level of safeguards activities and a comprehensive evaluation of all safeguards-relevant information[7] available to it about a State, including the results of its verification activities. A safeguards conclusion is drawn when all the necessary safeguards activities have been completed and no indication has been found by the Secretariat that, in its judgement, would constitute a safeguards concern.

9. For IAEA to be able to draw a safeguards conclusion that all nuclear material in a State with a comprehensive safeguards agreement is in peaceful activities, the State needs to have both a comprehensive safeguards agreement and an additional protocol in force, and IAEA must have been able to conduct all necessary verification and evaluation activities. For States with comprehensive safeguards agreements but no additional protocols in force, IAEA only draws a safeguards conclusion with respect to declared nuclear material.

Activities of IAEA since the 2010 Review Conference

10. This section reports on IAEA activities relevant to the implementation of article III of the Non-Proliferation Treaty, with a focus on the period since the 2010 Review Conference. The Final Document of the 2010 Review Conference contained a number of conclusions and recommendations for follow-on actions in that regard.

---

[6] Part II specifies the procedures to be applied for the implementation of the safeguards provisions of Part I.

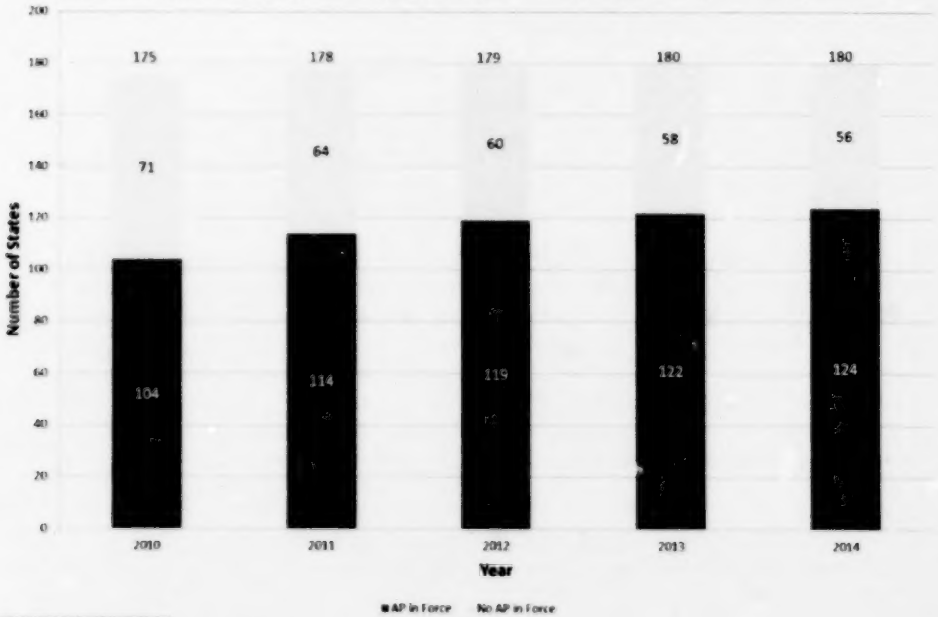
[7] The three main types of such information are: (a) information submitted by States; (b) information obtained through IAEA safeguards activities in the field and at headquarters; and (c) other relevant information (e.g., from open sources and provided by third parties).

1. Promoting the conclusion of comprehensive safeguards agreements and additional protocols

11. Although it is a legal obligation under article III of the Treaty for each non-nuclear-weapon State party to bring into force a comprehensive safeguards agreement, as of the end of 2014, 12 of those States had yet to conclude with IAEA and bring into force such an agreement. In response to calls for wider adherence to additional protocols in the Final Document of the 2010 Review Conference (Conclusions and recommendations for follow-on actions), resolutions of the IAEA General Conference and resolutions of the General Assembly, as of the end of 2014, 124 States (including 123 States party to the Treaty) had brought additional protocols into force; 60 of some 100 States had accepted the revised small quantities protocol text (which was in force for 53 of these States) and 4 States had rescinded their small quantities protocols.

12. IAEA has continued to implement the Plan of Action to Promote the Conclusion of Safeguards Agreements and Additional Protocols,[8] which has been updated annually since 2001. These outreach efforts have led to significant progress. At the time of the 2010 Review Conference, 18 non-nuclear-weapon States parties remained without comprehensive safeguards agreements in force and 101 States (including more than two thirds of the States with comprehensive safeguards agreements in force) had additional protocols in force. Since then, until the end of 2014, 6 additional States had brought into force comprehensive safeguards agreements; 23 States (including 22 States party to the Treaty) had brought into force additional protocols; 17 States had accepted the revised small quantities protocol text and 2 States had rescinded their small quantities protocols.

Status of additional protocols for States with safeguards agreements in force, 2010-2014 (the Democratic People's Republic of Korea is not included)



[8] www.iaea.org/safeguards/documents/sg_actionplan.pdf.

2. Safeguards implementation

13. As at the end of 2014, safeguards were applied for 180 States[9,10] with safeguards agreements in force with IAEA. The IAEA secretariat's findings and safeguards conclusions are reported annually to the IAEA Board of Governors through the Safeguards Implementation Report. The report also provides a description and analysis of IAEA safeguards activities and summarizes the challenges encountered. The release of the Safeguards Statement, Background to the Safeguards Statement and Summary of the Safeguards Implementation Report are subject to the approval of the Board of Governors.

14. In addition to the previously selected facilities in China, France, the United Kingdom of Great Britain and Northern Ireland and the United States of America, in 2010, for the first time, IAEA selected for the application of safeguards the storage facility at the International Uranium Enrichment Centre in Angarsk, Russian Federation, following an agreement between Russia and IAEA in March 2010 on the establishment of a guaranteed physical reserve of low enriched uranium at that facility. Therefore, IAEA has been applying safeguards in all five voluntary offer safeguards agreement States since 2010. While the number of facilities selected by IAEA from the States' lists of eligible facilities has remained relatively constant in the past five years, the total amount of nuclear material (by significant quantity)[11] under safeguards in these facilities has grown during this period by some 10 per cent.

3. Safeguards implementation issues

15. There have been a number of important safeguards implementation issues since the 2010 Review Conference. IAEA has been working to resolve outstanding safeguards implementation issues in three States.

Democratic People's Republic of Korea

16. Since 1994, IAEA has not been able to conduct all necessary safeguards activities provided for in the Democratic People's Republic of Korea Non-Proliferation Treaty Safeguards Agreement. Since April 2009, IAEA has not been able to implement any safeguards measures in the country. Therefore, IAEA could not draw any safeguards conclusion regarding the Democratic People's Republic of Korea during the time since the 2010 Review Conference.

17. Since April 2009, IAEA also has not implemented any measures under the ad hoc monitoring and verification arrangement agreed between IAEA and the Democratic People's Republic of Korea and foreseen in the Initial Actions agreed at the Six-Party Talks. Since 2010, the Democratic People's Republic of Korea has made a number of statements indicating that it is continuing its nuclear activities, including statements concerning: the conduct of a third nuclear test and its "right" to conduct further nuclear tests; uranium enrichment activities; construction of a light water reactor; and its intention to readjust and restart its nuclear facilities at Yongbyon.

---

[9] These States do not include the Democratic People's Republic of Korea, where IAEA did not implement safeguards and, therefore, could not draw any conclusion.

[10] And Taiwan Province of China.

[11] "Significant quantity" is the approximate amount of nuclear material for which the possibility of manufacturing a nuclear explosive device cannot be excluded.

18. Although not implementing any verification activities in the field, IAEA has continued to monitor the nuclear activities of the Democratic People's Republic of Korea by using open source information (including satellite imagery and trade information). Using satellite imagery, IAEA has continued to observe signatures which are consistent with operation of the 5-megawatt electric (MWe) reactor at Yongbyon and renovation or expansion of other buildings within the site. However, without access to the relevant site, IAEA cannot confirm the operational status of the reactor or the purpose of the other observed activities. IAEA has continued to further consolidate its knowledge of the nuclear programme of the Democratic People's Republic of Korea with the objective of maintaining operational readiness to resume safeguards implementation in the country.

Islamic Republic of Iran

19. Since 2010, the IAEA Board of Governors has adopted two resolutions on the implementation of safeguards in the Islamic Republic of Iran.[12] In June 2010, the Security Council also adopted an additional resolution[13] related to Iran's nuclear programme in which the Council, inter alia, affirmed the Islamic Republic of Iran shall cooperate fully with IAEA on all outstanding issues, particularly those which give rise to concerns about the possible military dimensions of the Iranian nuclear programme, including by providing access without delay to all sites, equipment, persons and documents requested by IAEA. The Council also decided that Iran shall, without delay, comply fully and without qualification with its Safeguards Agreement, including through the application of modified Code 3.1 of the Subsidiary Arrangements General Part to its Safeguards Agreement, and called upon the Islamic Republic of Iran to act strictly in accordance with the provisions of its additional protocol and to ratify it promptly. In November 2011, the Director General of IAEA set out in more detail the basis for the Agency's concerns about possible military dimensions to Iran's nuclear programme. As of the end of 2014, contrary to the relevant binding resolutions of the Board of Governors and the Security Council, Iran had not implemented the provisions of its additional protocol, implemented the modified Code 3.1 of the Subsidiary Arrangements General Part, suspended all enrichment related activities or suspended all heavy water-related activities.

20. In November 2013, IAEA and the Islamic Republic of Iran signed a "Joint Statement on a Framework for Cooperation", in which they agreed to strengthen their cooperation and dialogue aimed at ensuring the exclusively peaceful nature of the country's nuclear programme through the resolution of all outstanding issues and to proceed with IAEA verification activities in a step-by-step manner. Out of a total of 18 practical measures agreed between November 2013 and May 2014, as of the end of 2014, the Islamic Republic of Iran had implemented 16 of them; 2 of the practical measures related to possible military dimensions of the country's nuclear programme remained to be implemented. IAEA also invited the Islamic Republic of Iran to propose new practical measures to address concerns over possible military dimensions, to be implemented in the next step of the Framework for Cooperation, but the country had not proposed any such measures and no new practical measures had been agreed by the end of 2014.

[12] GOV/2011/69 (18 November 2011) and GOV/2012/50 (13 September 2012).

[13] Resolution 1929 (2010).

21. On 24 November 2013, China, France, Germany, the Russian Federation, the United Kingdom and the United States agreed on a Joint Plan of Action with the Islamic Republic of Iran in Geneva. The preamble to the Joint Plan of Action states that "the goal for these negotiations is to reach a mutually-agreed long-term comprehensive solution that would ensure the country's nuclear programme will be exclusively peaceful". Since 20 January 2014, IAEA has undertaken monitoring and verification activities in relation to the nuclear-related measures set out in the Joint Plan of Action. The initial duration of the Joint Plan of Action was six months. On 24 July 2014, it was extended until 24 November 2014, when it was further extended until 30 June 2015. The Agency's work in relation to the Joint Plan of Action has required approximately doubling its verification activities compared with those it had been carrying out pursuant to the country's Safeguards Agreement and the relevant resolutions of the Board of Governors and the Security Council.

22. As outlined in the relevant reports of the Director General to the Board of Governors, while IAEA has continued to verify the non-diversion of declared nuclear material at nuclear facilities and location outside facilities declared by the Islamic Republic of Iran under its Safeguards Agreement, IAEA has not been in a position to provide credible assurance about the absence of undeclared nuclear material and activities in Iran and, therefore, to conclude that all nuclear material in the country is in peaceful activities.

Syrian Arab Republic

23. In his report to the Board of Governors of May 2011, the Director General provided the Agency's assessment that, on the basis of all the information available to IAEA and its technical evaluation of that information, it was very likely that the building destroyed at the Dair Alzour site in the Syrian Arab Republic was a nuclear reactor which should have been declared to IAEA. In June 2011, the Board of Governors, by a vote, adopted a resolution in which, inter alia, it found that the country's undeclared construction of a nuclear reactor at Dair Alzour and failure to provide design information for the facility constituted non-compliance by the Syrian Arab Republic with its obligations under its Non-Proliferation Treaty Safeguards Agreement with IAEA in the context of article XII.C of the IAEA Statute. The Board of Governors called upon the Syrian Arab Republic to remedy its non-compliance urgently and provide IAEA with updated reporting under its Safeguards Agreement and access to all information, sites, material and persons necessary for IAEA to verify such reporting and resolve all outstanding questions so that the Agency could provide the necessary assurances as to the exclusively peaceful nature of the country's nuclear programme. The Board also decided to report, as provided for in article XII.C of the Statute, through the Director General, the country's non-compliance with its Safeguards Agreement to all members of IAEA and to the Security Council and the General Assembly. The Board requested the Director General to continue his efforts to implement fully the IAEA Safeguards Agreement with the Syrian Arab Republic and to report any significant developments to the Board and to the Council, as appropriate, and decided to remain seized of the matter. In September 2014, the Director General informed the Board of Governors that no new information had come to the knowledge of IAEA that would have an impact on the Agency's 2011 assessment about the building destroyed at the Dair Alzour site, and renewed his call upon the Syrian Arab Republic to cooperate

fully with IAEA in connection with unresolved issues related to the Dair Alzour site and other locations. The Syrian Arab Republic has yet to respond to these calls.

24. In September 2013 the Director General reported to the Board that, after considering the assessment by the United Nations Department of Safety and Security of the prevailing security conditions in the Syrian Arab Republic and the small amount of nuclear material as declared by the country at the Miniature Neutron Source Reactor, a decision was made to postpone a physical inventory verification at the reactor in Damascus until the security conditions had improved sufficiently.[14] As at the end of 2014, the assessment had not changed.

4. Development of safeguards concepts, approaches, and technology

State-level concept

25. In order to continue to draw soundly based safeguards conclusions and to increase confidence that States are abiding by their safeguards obligations, IAEA has continued to develop and apply a concept for safeguards implementation, within the existing legal framework, termed the State-level concept. The State-level concept refers to the general notion of implementing safeguards in a manner that considers a State's nuclear and nuclear-related activities and capabilities as a whole, within the scope of the State's safeguards agreement. The State-level concept is applicable to all States with safeguards agreements in force. Although "State as a whole" considerations in the implementation of safeguards are long-standing, dating back to the early 1990s, the term "State-level concept" has been used by the Secretariat only since 2004. Customized (i.e., tailor-made) State-level safeguards approaches for individual States have been implemented to date for the 53 States under integrated safeguards[15] (i.e., States with comprehensive safeguards agreements and additional protocols for which the broader conclusion[16] has been drawn and where the necessary arrangements have been completed to implement the State-level safeguards approaches).

26. In 2013, the Director General submitted a report on the State-level concept to the Board of Governors. In 2014, following a series of technical meetings on the concept between the Secretariat and member States, a document supplementing the 2013 report was submitted to the Board. The 2014 supplementary document provided more details on information presented in the 2013 report and also described how the State-level concept is applicable to States with item-specific safeguards agreements and States with voluntary offer safeguards agreements. The 2014 supplementary document stated, inter alia, that the IAEA secretariat would continue to implement the existing 53 State-level safeguards approaches for States under integrated safeguards and was currently in the process of updating them; planned for the progressive development of State-level safeguards approaches for other States in the future; and

[14] In 2014 the Syrian Arab Republic indicated readiness to receive IAEA inspectors and to provide support, for the purpose of performing a physical inventory verification at the Miniature Neutron Source Reactor.

[15] Integrated safeguards refer to an optimized combination of all safeguards measures available to IAEA under comprehensive safeguards agreements and additional protocols. Integrated safeguards may be implemented for States for which IAEA has drawn the broader conclusion. Integrated safeguards are aimed at optimizing the effectiveness and efficiency of safeguards implementation for those States.

[16] A safeguards conclusion, for a State with a comprehensive safeguards agreement and an additional protocol in force, that all nuclear material in a State remains in peaceful activities.

that in developing and implementing a State-level safeguards approach for a State, the Secretariat would consult with the State and/or regional authorities, particularly on the implementation of in-field safeguards measures. The 2014 supplementary document also noted that the implementation of safeguards in the context of the State-level concept would not entail the introduction of any additional rights or obligations on the part of either States or IAEA nor any modification in the interpretation of existing rights and obligations, and that the IAEA secretariat would use uniform processes and better defined procedures to develop State-level safeguards approaches and guide safeguards implementation in a consistent and non-discriminatory manner for all States with the same type of safeguards agreement.

27. The Board of Governors took note of the 2013 report and the clarifications and additional information provided in the 2014 supplementary document and the Director General's intention to continue to keep the Board informed on the matter. In 2014 the IAEA General Conference, following an intensive consultation process between the Secretariat and member States, adopted resolution GC(58)/RES/14 in which, inter alia, it welcomed the clarifications and additional information provided in the 2014 supplementary document. It also welcomed the important assurances contained in the 2014 supplementary document and its corrigenda, and in the statements by the Director General and the Secretariat as noted by the Board of Governors at its September 2014 session.

Safeguards approaches for facilities

28. IAEA seeks to continually improve the effectiveness and efficiency of safeguards implementation at facilities by evaluating safeguards approaches and identifying potential improvements. IAEA implements these approaches in cooperation with States and/or regional authorities. Enhancements to safeguards implementation at existing facilities may be achieved by, for example, installing new equipment such as remote monitoring systems, dual containment and surveillance or unattended measurement systems. For facilities that are under construction, IAEA works closely with the relevant State and/or regional authority, and the facility operator, to incorporate safeguards features into the design of new facilities. For example, for the past several years, IAEA has been involved in the development of the safeguards approach for facilities under construction at the site of the Chernobyl nuclear power plant in Ukraine and the Mixed Oxide Fuel Fabrication Plant at the Rokkasho site in Japan. IAEA, the European Commission, Finland and Sweden have cooperated closely to prepare for safeguards implementation at encapsulation plants and geological repositories being planned in those States.

Information analysis

29. The analysis of safeguards-relevant information is an essential part of evaluating a State's nuclear activities and drawing safeguards conclusions. In drawing its safeguards conclusions, IAEA processes, evaluates and conducts consistency analyses of State declarations, the results of its verification activities and other safeguards-relevant information available to the Agency. Since 2010, IAEA has continued to enhance and diversify its capabilities to acquire and process data, analyse and evaluate information and generate knowledge and to securely distribute information internally, as an essential contribution to the State evaluation process and the drawing of safeguards conclusions.

30. The volume of safeguards-relevant information has continued to rise in the past five years. On an annual basis, IAEA receives some 700,000 declarations and reports entries provided by States, prepares over 200 nuclear material balance evaluation reports and integrates and interprets the results of between 400 and 500 environmental samples. Some 400-500 satellite images are acquired and analysed each year for safeguards purposes.[17] In 2011, IAEA formally accepted a geospatial exploitation system to support the analysis of imagery and the secure dissemination of geospatial data within the Department of Safeguards. The number of member States voluntarily supporting IAEA with information on safeguards-relevant trade and procurement, outside of reporting obligations pursuant to relevant safeguards agreements, has increased three-fold since 2010. Ongoing reviews of technical cooperation projects and procurements also provided relevant safeguards input.

31. IAEA has also continued to investigate new tools and methodologies to streamline and prioritize the associated workflows and processes. IAEA has worked to strengthen links between State evaluation- and verification-related activities in the field. State evaluation has increasingly been carried out collaboratively, by multidisciplinary teams of IAEA staff. To continuously improve the quality of the information on which it must rely, the IAEA monitored laboratory and measurement systems performance, organized international technical meetings and provided to States training and workshops on nuclear material accounting, including measurement and material balance evaluation concepts.

Safeguards sample analysis

32. The IAEA Safeguards Analytical Laboratories in Seibersdorf, Austria, is responsible for processing, screening, distributing, analysing and archiving environmental and nuclear material samples. In the past five years, IAEA has undertaken a major project called "Enhancing Capabilities of the Safeguards Analytical Services". In September 2011, IAEA formally opened the new extension to the IAEA Clean Laboratory at the Safeguards Analytical Laboratories. It contains a state-of-the-art Large Geometry Secondary Ion Mass Spectrometer that greatly improves the Agency's ability to independently analyse environmental samples. In September 2013, IAEA inaugurated the new Nuclear Material Laboratory at the Safeguards Analytical Laboratories, giving the Department of Safeguards an enhanced set of independent verification capabilities in areas such as the analysis of uranium, plutonium, spent fuel and high-activity liquid waste samples, as well as in archiving samples safely and securely. This comprehensive modernization of the safeguards laboratories is one of the most important projects which IAEA has undertaken to support its safeguards activities.

33. The IAEA Network of Analytical Laboratories, which augments the analytical capabilities of the Safeguards Analytical Laboratories, currently comprises the Laboratories and 20 other qualified laboratories of IAEA member States and the European Commission. IAEA is working to qualify additional laboratories in other member States for environmental analysis as well as for nuclear material sample analysis.

[17] In addition, in 2011, in response to the earthquake and tsunami in Japan, IAEA acquired and analysed imagery of the Fukushima Daiichi nuclear power plant on a daily basis and provided extensive analysis of radionuclide inventories. This information played a critical role in helping to inform member States, as well as the public, about the situation.

Safeguards information technology

34. In the area of safeguards infrastructure development, IAEA has been working to modernize its information technology for safeguards to address shortcomings: safeguards information technology has over the years become outdated, is increasingly difficult to maintain, is struggling to cope with the mounting volume and diverse formats of data and information, does not support all safeguards activities and is becoming more vulnerable to cyberattacks. Since 2010, IAEA activities have focused in particular on modernization of software applications that support the Agency's daily safeguards activities and on transferring them to a modern information technology platform. The applications help, for example, to manage nuclear material accounting data and record data and generate reports from inspectors' in-field activities, store results of nuclear material samples and assist in the internal evaluation of the quality and effectiveness of the performed verification activities. IAEA has also worked to strengthen information technology security. The final step in the modernization will be carried out under the "Modernization of Safeguards Information Technology" (MOSAIC) project, which was established in 2013. Completing the modernization is essential to address current deficiencies and improve the performance of safeguards activities.

Safeguards equipment

35. Safeguards implementation relies heavily on technology, which needs to be reliable, fit for purpose and secure. IAEA has increased its efforts since 2010 to improve system reliability and modularity, optimize the use of commercial off-the-shelf components and enhance the usability of portable verification instruments and systems. The use of remote monitoring systems has continued to increase since 2010, when 258 safeguards systems with remote monitoring were in use. By mid-2014, this figure had grown to 283. Likewise, the number of installed surveillance systems increased from 1,173 to 1,362 between 2010 and 2014. A major improvement over this time period has been the replacement of outdated surveillance systems with the "Next Generation Surveillance System"; to date, more than 400 such systems are installed and operating across the globe. IAEA has also developed, tested, authorized and deployed new instruments since 2010, including, for example, new laser surface mapping verification systems, seal readers, small portable radiation detection and identification units and portable Raman spectrometers.

5. Cooperation with State and regional authorities

36. The practical day-to-day implementation of safeguards for a State works best when it is conducted as a cooperative effort between IAEA and the State, sharing a common understanding and seeking to achieve a successful outcome. IAEA places great value on effective cooperation with State and regional authorities responsible for safeguards implementation, and works to enhance understanding and capacity by providing advisory services, training and assistance and publishing guidance documents addressing all aspects of safeguards implementation. States also make substantial contributions to enhancing the effectiveness and efficiency of IAEA safeguards by, for example: participating in field trials of new safeguards instruments or measures; providing information, in addition to that required under the safeguards agreement or additional protocol, that facilitates safeguards implementation; making facilities available for training of IAEA staff; and

providing experts to contribute to development of guidance documents on safeguards implementation and safeguards by design principles.

Advisory services

37. The IAEA State System of Accounting for and Control of Nuclear Material Advisory Service provides States, at their request, with advice and recommendations on the establishment and strengthening of their State System of Accounting for and Control of Nuclear Material. These Advisory Service missions involve a preparatory meeting followed by a mission, and result in a confidential report to the State with detailed recommendations on how any shortcomings identified in the performance of the respective State System could be rectified and/or further cooperation with IAEA could be implemented to enhance the effective and efficient implementation of IAEA safeguards. Between 2010 and 2014, a total of nine Advisory Service missions were conducted.

Training for member States

38. The IAEA Member State Training Programme in the area of safeguards plays a vital role in building up sustainable knowledge and skills among professionals working at State and regional systems of accounting for and control of nuclear material and in enhancing cooperation between the State and IAEA, which is essential for the effective implementation of safeguards. During the past five years, IAEA has continuously improved the design and delivery of State System of Accounting for and Control of Nuclear Material training activities, taking into account relevant technical developments and state-of-the-art teaching methods.

39. The IAEA Member State Training Programme is addressed to professionals in governmental organizations, regulatory bodies, utilities, the medical sector, relevant industries and customs. Training courses are provided regularly at the regional and international levels and, upon request, at the national level. The courses provided have a modular structure covering a large spectrum of topics, such as safeguards agreements and protocols, accountancy and control of nuclear material, IAEA verification activities, nuclear material measurement techniques or safeguards by design. IAEA also provides customized training courses for States with small quantities protocols or for States introducing nuclear power. Between 2010 and 2014, more than 45 courses were held for about 1,100 professionals from more than 60 States.

40. To make the most use of limited resources, coordination is needed among the various stakeholders that offer safeguards-related training to member States that are building capacity in advance of new nuclear energy programmes. Several initiatives were taken by IAEA over the past five years in this area, including exchanges of lecturers, joint development of training material, sharing of schedules and participation in networks such as the Asia-Pacific Safeguards Network. In 2014, IAEA also developed the first eLearning Programme on safeguards that was developed in the framework of the interactive eLearning series explaining the IAEA Milestones Approach'[18] to introducing a nuclear power programme. The objective of the eLearning Programme is to create awareness for the key issues to be considered

[18] IAEA supports States pursuing nuclear power programmes to assess their preparedness, as described in the publication *Milestones in the Development of a National Infrastructure for Nuclear Power*, IAEA Nuclear Energy Series No. NG-G-3.1 (2007).

related to safeguards infrastructure by States embarking on new nuclear power programmes and the growing level of nuclear activities and quantity and quality of nuclear material in the planning, construction and operation phases of the Milestones Approach.

Guidance documents

41. In 2012, IAEA established the Resources and Assistance for States web page (located at www.iaea.org/safeguards), providing States with access to a wide variety of safeguards guidance, forms, templates and other reference documents. IAEA published the *Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols* (IAEA Services Series No. 21) in March 2012. In 2013, the *Safeguards Implementation Guide for States with Small Quantities Protocols* (IAEA Services Series No. 22) was published in English and subsequently translated into French and Spanish. In 2014, IAEA published the first of four "Safeguards Implementation Practices Guides", entitled *Safeguards Implementation Practices Guide on Facilitating IAEA Verification Activities* (IAEA Services Series No. 30). The Guides aim to provide additional explanatory information and share the experiences and practices of States in implementing their safeguards responsibilities.

Outreach

42. To foster increased dialogue and information exchange with representatives from member States on safeguards matters, IAEA has held a series of technical meetings in addition to its regular consultations. During 2014, IAEA held six interactive technical meetings and held other consultations on the State-level concept.

6. Preparing for the future

Strategic planning

43. Since 2010, IAEA has continued to conduct regular and systematic strategic planning to prepare for the future. It has been implementing the IAEA Medium Term Strategies 2006-2011 and 2012-2017. In August 2010, the Department of Safeguards finalized its first ever long-range strategic plan for 2012-2023 for safeguards, which was presented at the 2010 Safeguards Symposium. In 2012, IAEA also developed a corresponding research and development plan for the same period that articulates the capabilities needed to achieve its objectives and identifies and conveys to member States IAEA safeguards research and development needs of the future.[19] To address near-term development objectives and support safeguards implementation activities, IAEA continued to update its biennial development and implementation support programmes.

[19] The plan addresses the Department's research and development needs in areas such as safeguards concepts and approaches; detection of undeclared nuclear material and activities; safeguards equipment and communication; information technology, collection, analysis and security; analytical services; possible new mandates; and training.

Member States Support Programmes

44. IAEA safeguards development and implementation support needs could not be met without the transfer of technology, funds and expertise provided by member States. Member States Support Programmes have continued to make substantial contributions (in cash and in kind) to the IAEA safeguards since 2010. Today, IAEA is supported by 21 Member States Support Programmes participating in over 350 active tasks. IAEA relies on the unique type of assistance that the Programmes can provide, such as national laboratories to develop equipment for safeguards, facilities for training inspectors and laboratories for conducting independent analyses. Member States Support Programmes remain the principal vehicle through which IAEA achieves its safeguards-related research and development objectives.

Safeguards symposiums

45. Since 2010, IAEA has held its eleventh and twelfth symposiums on international safeguards, in Vienna. The objective of the two symposiums was to foster dialogue and information exchange between the Secretariat, member States, the nuclear industry and members of the broader safeguards and nuclear non-proliferation community. The theme of the eleventh symposium was "Preparing for Future Verification Challenges". Participants discussed in key sessions the Agency's strategic priorities in advancing cooperation between IAEA and its member States, strengthening the Agency's technical capabilities (safeguards approaches, technologies and infrastructure), bolstering its State evaluation capabilities (for example, information collection and evaluation), developing its organizational culture and managing the safeguards workforce and knowledge. At the 2014 symposium, entitled "Linking Strategy, Implementation and People", discussions were structured around the long-term research and development plan of the Department of Safeguards. Presenters examined the Agency's priorities in the areas of advancing cooperation between IAEA and States, strengthening the Agency's technical capabilities (safeguards approaches, technologies and infrastructure), bolstering the Agency's State evaluation capabilities and managing the safeguards workforce and knowledge.

Technology foresight

46. Recognizing the fast pace of technology development, and to remain informed of technological developments with potential safeguards applications, IAEA held "Technology Foresight Workshops" in Vienna in 2012 and 2014. Presentations were delivered on a broad range of topics, including active neutron interrogation, X-ray fluorescence, statistical methods and robotics. In addition, technical meetings with external experts were held on specific topics such as image processing and inertial navigation.

Safeguards by design and proliferation resistance

47. For the effective and efficient implementation of safeguards at new facilities, safeguards measures need to be considered from the initial design planning stages. Following the previous Review Conference, the concept of "safeguards by design" has drawn increasing interest. IAEA has been working to support States and the

nuclear industry in this area by providing general and facility-specific safeguards by design guidance.[20]

48. During the past five years, IAEA has also continued to contribute to assessments of proliferation-resistant nuclear energy systems through its International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) and the Generation IV International Forum, participating in meetings and helping to prepare associated reports.

7. Management and resources

49. Over the past years, the general trend has been of increasing safeguards responsibilities: in the past five years, the number of nuclear facilities under safeguards has risen by 12 per cent and the quantity of nuclear material under safeguards has increased by 14 per cent. In 2014, IAEA was implementing safeguards in some 1,300 facilities, an increase of some 100 facilities since 2010. It spent some 12,000 calendar days in the field, carrying out inspections and other verification activities, and applied safeguards to nuclear material equivalent to approximately 190,000 significant quantities, an increase of some 20,000 compared with year 2010.

Financial resources

50. The financial resources allocated to the Department of Safeguards in 2014 included €131 million from the regular budget and €33 million from extrabudgetary contributions. IAEA has been heavily focused on increasing its efforts in pursuing more efficient and effective ways of implementing safeguards.

51. Efficiency measures have been identified and applied in the areas related to verification activities in the field, upgrading/replacement of equipment and technology, changing to low-maintenance engineering solutions, streamlining and optimization of organizational management processes and continuous implementation of a quality management system. For instance, in cooperation with States, unannounced inspections have been introduced in additional States. The required inspection effort in the field has also been reduced by the introduction and installation of new unattended monitoring systems with remote transmission capability in a number of nuclear facilities. Combining verification activities with installation of equipment in the field has in turn resulted in reductions in travel costs and more efficient optimization of human resources. New information technology tools have been introduced which have resulted in improved staff access to information and facilitated reporting on verification activities and State evaluation. Upon finalization of the MOSAIC project, the improved information technology systems and processes will significantly contribute to the effectiveness and efficiency of safeguards implementation. In addition, in the past five years, IAEA has developed a cost methodology for safeguards which aids in the analysis of the costs of carrying out safeguards activities and the identification of efficient options for their implementation. Further efficiencies are anticipated from the implementation

[20] As part of the IAEA Nuclear Energy series, the Agency published "International Safeguards in Nuclear Facility Design and Construction" (NP-T-2.8) in 2013. "International Safeguards in the Design of Nuclear Reactors" (NP-T-2.9) was issued in 2014, the first in a series of facility-specific guidance.

of safeguards in the context of the State-level concept, including the application of integrated safeguards.

Safeguards workforce

52. The human resources necessary for IAEA to implement safeguards include a wide variety of specialists, mainly nuclear engineers and nuclear physicists. Other scientific and technical groups comprise analysts, chemists, mathematicians, training and education specialists and information management and information technology specialists. To maintain a workforce capable of meeting current and future needs, IAEA continually develops the knowledge and skills of its staff involved in safeguards activities through the delivery of an up-to-date training programme. Since 2010, it has held an average of 100 training courses per year to achieve the technical and behavioural competencies of the staff in the Department of Safeguards (inspectors, analysts, staff from technical divisions, etc.) needed to ensure that safeguards activities are carried out in an effective manner. Each year, it has held an "Introductory Course on Agency Safeguards" for a new generation of IAEA inspectors. In addition to technical training, staff members in supervisory positions have been provided with leadership and management training. Support from member States has been essential to the training of IAEA safeguards staff, particularly in hosting courses involving practical exercises requiring nuclear facilities and/or nuclear material, and in supporting the development of new training tools such as virtual reality environments for facility and process familiarization, training manuals and e-learning platforms.

53. Since 2010, IAEA has also organized three 10-month "Safeguards Traineeship Programmes", training a total of 18 young graduates and junior professionals from 17 different developing countries in order to prepare them for employment in their home countries in the peaceful use of atomic energy, as well as to increase the number of qualified candidates from developing countries for possible hire as safeguards inspectors, either by IAEA or by their national nuclear-related organizations.

Quality management and performance measurement

54. The Department of Safeguards strives to continuously improve its performance through the implementation of a rigorous and comprehensive quality management system. The Department's quality management system helps to ensure that all safeguards activities are performed consistently, objectively and effectively. In addition to the quality management system, the Department of Safeguards initiated activities in 2014 to identify, select and determine how to use performance indicators more effectively to assess its activities and their results and to monitor trends.

Information security

55. Information security is of vital importance to the Department of Safeguards, given the sensitivity of the information in its custody. Safeguards information is protected using a layered approach involving physical protection, policy and procedures, technical controls and security awareness.

56. IAEA has made significant advancements in each of these areas over the past five years. For example, all servers and storage and network equipment have been

placed in highly secure and protected data centres; physical security and controls on access to safeguards offices and laboratories have been strengthened; in-house capabilities to detect and combat malware and other cyberthreats have been significantly expanded; laptops now feature full disk encryption; a robust internal secure environment that is disconnected from the Internet has been established in the Department of Safeguards to handle classified information; security awareness among staff has been raised through training and other steps; and in 2014 the procedures for classification and handling of sensitive information were substantially improved.

8. Conclusion

57. The 2010 Review Conference reaffirmed that IAEA is the competent authority responsible for verifying and assuring States parties' compliance with their safeguards agreements. IAEA has continued to function as such, implementing safeguards and drawing safeguards conclusions. Since 2010, safeguards have been strengthened and their implementation has further evolved in order for IAEA to continue to fulfil its mandate under article III of the Non-Proliferation Treaty.

58. During the period between the 2010 Review Conference and the end of 2014, 6 additional States brought into force comprehensive safeguards agreements; 23 States (including 22 States party to the Non-Proliferation Treaty) brought into force additional protocols; 17 States accepted the revised small quantities protocol text and 2 States rescinded their small quantities protocols, thereby enabling IAEA to apply safeguards and draw safeguards conclusions for a higher number of States and strengthening the assurances provided through IAEA safeguards.

59. IAEA has been continuing its effort to resolve outstanding safeguards implementation issues in three States.

60. The implementation of IAEA safeguards has evolved through, for example, the further development and implementation of the State-level concept, improved safeguards approaches for facilities, strengthened information analysis and State evaluation and use of technology (e.g., remote monitoring and information technology). Verification effort has been reduced through, for example, the implementation of short notice random inspections.

61. In the past five years, IAEA has invested in improving vital safeguards infrastructure and technology. Significant enhancements have been made at the Safeguards Analytical Laboratories and safeguards information technology is being modernized. A new project, called MOSAIC, has been initiated to complete the modernization. Outdated surveillance cameras have been replaced with the Next Generation Surveillance System. New information analysis tools and a geospatial exploitation system have been adopted to support information analysis and visualization.

62. Because the implementation of safeguards is a cooperative effort, IAEA has been working to improve cooperation with States and regional authorities. Through missions of the IAEA State System of Accounting for and Control of Nuclear Material Advisory Service, IAEA has provided advice and recommendations on strengthening State Systems of Accounting for and Control of Nuclear Material. International, regional and national training courses have been held for participants from more than 60 States and new eLearning Programmes have been produced.

Several new guidance documents have been issued for States and regional authorities responsible for safeguards implementation along with the provision of other resources. To foster dialogue with States, IAEA has held a series of meetings with member States to discuss safeguards matters. Two major safeguards symposiums were held, in 2010 and 2014, to exchange views between the Secretariat, member States, the nuclear industry and members of the broader safeguards and nuclear non-proliferation community.

63. To prepare for the future, IAEA has been conducting strategic planning and working with Member State Support Programmes to address safeguards-related research and development needs. It has held technology foresight meetings, worked on safeguards by design guidance and contributed to assessments of proliferation-resistant nuclear energy systems through its International Project on Innovative Nuclear Reactors and Fuel Cycles and the Generation IV International Forum.

64. All these efforts have strengthened the effectiveness and improved the efficiency of safeguards, at a time when the Agency's workload has grown steadily but its resources have not increased commensurately. Given the increasing responsibilities, IAEA in the past five years has had to "do more with less". Hence, IAEA has been working to employ more efficient and effective ways of implementing safeguards to increase productivity. Management activities have focused on sustaining and enhancing its workforce, strengthening quality management and performance measurement and improving information security.

65. In the future, given the sustained interest in the use of nuclear energy, IAEA expects more nuclear material and facilities to come under safeguards. International nuclear cooperation is intensifying with an expansion in trade and services in nuclear and related equipment, items and materials. IAEA will also need to continue to address the outstanding safeguards implementation issues in individual States. Therefore, IAEA is likely to have to deliver soundly based safeguards conclusions in a resource constrained environment into the future. IAEA will continue to seek ways to improve its productivity by optimizing processes, making better use of modern technology and by enhancing cooperation with State and regional authorities in the implementation of safeguards. Continued success will require States' political, technical and financial support.